



Current Notes

Vol. 7 No. 10

December 1987

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EDITORIAL

By Joe Waters

COMDEX '87

I was one of the (perhaps few) old Atari hands at Comdex who was favorably impressed with what I saw. You'll hear skeptics, of course, who will say "I'll believe it when I see it!" — some of them in these pages as a matter of fact. Many Atari observers do not believe Atari will ship these products when they say they will. Others don't believe they will ever ship these products. I do. I think all of the announced products will arrive — sometime (granted, Atari's announced shipping dates tend to be overly optimistic). But COMDEX is not a show to advertise what's in your local computer store. It's a show to indicate the direction computer manufacturers are taking over the coming year. In Atari's case, what was so impressive was not any one individual new product, but rather the breadth and depth of the products offered by this one company.

Atari is manufacturing and selling (and making money on) games and game machines — the 2600, 7800, and the new XE Game System. It also has a full line of 8-bit computers (the 65XE and 130XE) and associated peripherals. None of these were at COMDEX.

The Atari ST line, the 520, 1040, ST2, and ST4, were there. Although the ST line is also a great game machine, there weren't many games in evidence. This was a show for business dealers. The applications being shown were primarily in areas where the ST is a strong competitor: CAD/CAM applications, word processing (*MS Word* and *WordPerfect*) and desk-top publishing (*Super-Charged Easy-Draw*, *Publishing Partner*, *GFA Publisher*, *Publisher ST*, and *Atari Deskset*). Two other areas of ST strength, animation and music, were also on display. Gary Yost of Antic was performing spectacular feats of animation in real time as passers by watched in awe. Similarly, Frank Foster of Hybrid Arts was showing off the ST's strength in music recording and playback.

In addition to new software demos, some new hardware was also shown for the ST/Mega line. The new 20 Mb and 40 Mb hard drives, in Mega-like boxes, were introduced. The Atari SLM804 laser, announced earlier, was in evidence all over the Atari booth. Indeed, every one of the desktop publishing programs on display, as well as *MS Word*, were sending their output to the Atari laser. And, finally, the long-awaited Atari CD-ROM drive was on display alternating between the Visual Dictionary (French/English) and CD music discs.

Most readers are well aware of Atari's emulation capabilities. Both the Magic Sac and

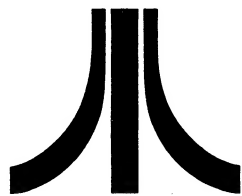
pc-ditto were being demo'ed at COMDEX. But another new entrant was also introduced: UNIX, well, almost. Whitesmiths, Ltd was showing their IDRIS operating system running on the Mega STs. Under this multi-user, multi-tasking system, a Mega ST can support several users allowing each to share common peripherals such as hard drives and printers. It is very similar to UNIX and the various packages being shown running under IDRIS were ported over from UNIX environments. In this small business environment, word processors on display, such as *LEX*, *Word ERA*, and *Crystal*, were more on the order of very full-featured, multi-user document management systems.

Atari had previously announced, if not shipped, their IBM PC1 clone. At this year's COMDEX, they showed their XT clone (PC2), AT clone (PC4), and 386 clone (PC5). Having a complete line of products based on the Intel chips is a whole different story than simply having a single low-end PC clone. And Atari, like it did on the ST line, has fine-tuned their clone performance to speed up I/O. The typical hard disk transfer rate for a PC or clone is 250 kilobytes/second. The Atari AT comes in at 400 Kb/sec and the 386 at 700 Kb/sec.

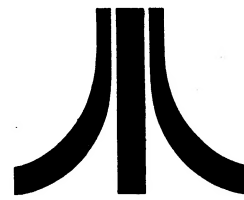
And, of course, the newest member of the scene, the ABAQ, represents a quantum leap into high performance computing. The market for this machine will be very specialized and ultimate sales will be counted in the thousands rather than tens of thousands. But it does give Atari a high-end status computer that, along with the complete Intel line and the new multi-user, multi-tasking Idris system running on their already strong 68000 machines and the upcoming introduction of their 68030 (not quite ready for this COMDEX) and the new local area networking capabilities which I haven't even mentioned yet, will shake the confidence of those who so nonchalantly dismiss Atari as a low-end game company of no importance in the computer world.

At COMDEX, Atari distributed a four-page "newsletter" that gives many more details on the various new products introduced. I have reprinted that newsletter here. It shows you what Atari had to say about their new products and also what some of those products can do. The following four pages (excluding the QN header and footer) were produced using the new Atari Deskset program and the Atari laser.

An incredible array of products! Now, if only Atari can figure out how to market them....



ATARI®



NEW PRODUCT NEWS

FALL COMDEX 1987 EDITION

NEW ADVANCED SYSTEMS ARE HITS AT FALL SHOW

LAS VEGAS, NV. -- In a series of major product introductions, Atari Corporation emerges as a maker of a complete line of high-performance, low-cost solutions for the business, engineering and personal computing worlds.

New technology is showcased by ABAQ, an ultra-high-performance workstation with blazing speed and dazzling graphics. ABAQ, based on a sophisticated transputer chip, runs more than 10 times faster than the PC/AT and more than 4 times faster than the 68020 with math coprocessor. The parallel processing capability of ABAQ lets a single system multiply its processing power by adding extra transputer chips.

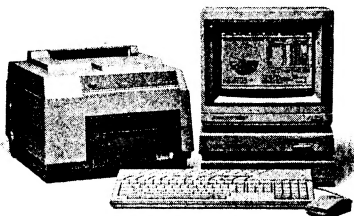
Atari unveiled its new CD player capable of reading CD-ROM disks and playing all commercially available CD music disks. The CD-ROM is supported by a MEGA and ST compatible DMA interface, and will retail for only \$599.

Atari's connectivity system for the ST, Mega, and PC computers is compatible with the NETBIOS standard used by IBM and Novell. It communicates data at 1 megabits-per-second to Atari computers and to PC compatibles and over 250K bits-per-second over Appletalk over a second independent channel.

The Atari MEGA computers are featured with a variety of solid business solutions.

At Atari, desktop publishing is represented by both the Atari SLM804 Laser Printer and Deskset by G.O. Graphics. G.O. Graphics is currently porting this Compugraphic compatible program for marketing by Atari.

The top two word processors from the PC world are now compatible with the ST and Mega. Word Perfect is displaying, the now shipping, Word Perfect for both the Atari ST and MEGA computers. Word Perfect ST has all the features of the PC version, supports the mouse and windows, and runs faster than the PC version. Microsoft Write is also on display. Write is a direct port of Microsoft Word 1.05 for the Macintosh.



Atari's new MEGA with Laser Printer.

A group of third party vendors are appealing to the MEGA and ST VAR market with vertical packages running under IDRIS, the multi-user/multitasking operating system. Several new high-end CAD packages are on display including Foresight's Drafix-1. Desktop video is

represented by several powerful products from Sony and from Antic Software. Additional MEGA and ST software products are being displayed in other Comdex booths.

Atari expanded its PC-compatible offerings by adding two new models available in several configurations. The PC2 (PC/XT compatible) comes with EGA graphics, high clock speeds, and 5 XT style slots. The PC4 (PC/AT compatible) features EGA and VGA graphics, an even higher clock speed and AT style slots. Both sport low price tags. The PC2 and PC4 will be offered in a number of different internal disk drive configurations including combinations of hard disk and 3.5" or 5.25" floppy disks. These new models join the PC1, which is a basic PC/XT compatible, suitable for use as a LAN workstation and for standalone personal computing.

By closing the gaps in computer technology, Atari Corporation has once again taken the computer industry lead. With the introduction of the ABAQ, the CD-ROM, the PC line, the LAN, and the continued support of the existing Atari MEGA and ST computers with new peripheral and software products, Atari has proven that regardless of the computing needs, we have the answer.

REVOLUTIONARY COMPUTER MAKES DEBUT

LAS VEGAS, NV. -- At Fall Comdex '87, Atari announced a new addition to its growing computer product line. Called ABAQ, the new computer is based on the revolutionary transputer chip. ABAQ is the first parallel processing, high-performance, personal workstation of its kind.

With ABAQ, advances in applications such as desktop publishing and CAD will be phenomenal. Full page displays will

move desktop publishing into another realm. The solid and wire frame modeling graphics capabilities will bring 3-D CAD rendering and rotation up to levels that previously desktop computers could not have performed. The better than broadcast quality resolution will allow nearly photographic quality graphics. This feature alone will have a tremendous impact on the film, television and video industries

ability to computer generate special effects.

The screen resolutions available for ABAQ are very important. All screen resolutions are 60 HZ, portrait quality. The highest mode is 1280 X 960 (4 bit/pixel) color. This resolution is excellent for engineering drawings, desktop publishing, and film, television or video special effects work. The second resolution is 1024 X

Continued on page 8

ATARI INTRODUCES CONNECTIVITY

LAS VEGAS, NV. -- In today's computing environment, connectivity can be a genuine issue. As part of the overall Atari solution to computing problems, Atari introduced "PromiseLAN", a network system for the MEGA, ST, and PC.

PromiseLAN currently offers a new simplicity to the usually complicated task of networking. PromiseLAN can network 17 PCs in a star configuration using off-the-shelf telephone wire. No special cabling is necessary. Later versions of PromiseLAN software will offer full multi-drop systems.

Compatibility in connectivity is a justifiable concern. PromiseLAN provides full compatibility to IBM standards using NETBIOS. NETBIOS stands for Network Basic Input and Output System, and allows full compatibility to IBM computers and software. The PromiseLAN NETBIOS is a proprietary design that provides the utilities which send data to and receive data from the network adaptor cards.

The cards contain a proprietary chipset us-

ing very large scale integration (VLSI), which includes NETBIOS to support the standard IBM network operating system. Equally important, PromiseLAN provides an interface to AppleTalk. This allows the connection of Macintoshes to the PC network.

PromiseLAN also will provide record-locking. This operation excludes other users from accessing (or writing to) a record in a file while another user is accessing the same record. This is a necessity when common databases are used between computers.

Future PromiseLAN interface units will be developed for the Atari MEGA and ST computers. At that point, Atari MEGA computers with laser printers as desktop publishing systems could exchange data with a satellite group of Atari PCs as LAN stations. This system configuration would create an entire office environment where the 8088 world and 68000 world exist in perfect harmony.

CD-ROM/CD-AUDIO A SHOW STOPPER

LAS VEGAS, NV. -- Fall Comdex '87 saw the introduction of Atari's first CD-ROM/CD-Audio player. The 12 cm optical disc, originally developed for digital audio, can now be used to store over 540 megabytes of data. Atari has added audio playback capabilities to the CD-ROM, giving it the ability to play back normal audio Compact Discs at exceptionally high fidelity.

Since only light touches the data surface, an optical disc will not wear out. Error detection and correction methods safeguard the integrity of the information. Moreover, discs can be replicated at low cost, producing databases that are suitable for mass distribution.

The Atari CD can be connected to a Atari MEGA or ST computer for immediate on-line access to huge databases, to a stereo system for audiophile quality sound, or to both for computer aided instruction or entertainment. Commercial and governmental databases are available for business, medicine, law, library databases

and science.

The data retrieval capacity of the CD-ROM is revolutionary. Five hundred and forty megabytes of data corresponds to over 1000 typical floppy disks or over 200,000 pages of printed material or thousands of images or hours of spoken text.

Styled to match the existing Atari computer product lines, the Atari CD hosts a number of special features. A front-loading drawer design permits stacking the unit with other equipment. The front panel controls are on a removable infrared remote control unit allowing the audio functions to be controlled from across the room. A front panel stereo headphone jack with volume control is provided for private listening or education applications.

The computer control of audio functions includes the independent selection of left and right channels to support multiple audio programs. The CD by Atari - the newest in CD-ROM/CD-Audio players.

ATARI DESKSET: A PROFESSIONAL DESKTOP TYPOGRAPHY SYSTEM

LAS VEGAS, NV. -- At Fall Comdex '87, Atari introduced DeskSet, the professional software solution to desktop typesetting. Designed to work with the Atari SLM804 and the Atari MEGA4 Computer, DeskSet is the first laser typesetting system to include typesetting refinements required by typographers.

Professional features like automatic hyphenation and justification, character pair kerning, automatic character compensation and multiple exception hyphenation dictionaries are built into the software at no additional cost.

DeskSet eliminates the need for expensive processors, chemicals, photo paper and paste-up. Now you can achieve final output direct from your SLM804.

DeskSet is expandable to include graphics files scanned in from low cost scanners or created with many graphics programs. DeskSet gives a true What-you-see-is-what-you-get preview with graphics, using the actual printed fonts. Only DeskSet offers this versatility in a low cost laser printer system.

DeskSet does not require a standalone word processing program. It contains a powerful text editor. However, DeskSet will also accept ASCII files created with most MEGA or ST word processing programs.

DeskSet was developed by G.O. Graphics, a multi-million dollar company that has built more communications and conversion systems for typesetters than all other manufacturers combined.

With the introduction of DeskSet, Atari delivers a desktop system with professional power typesetting. The Atari MEGA (or ST computer), the SLM804 Laser Printer and DeskSet provide a comprehensive, professional desktop typesetting system that can solve any publishing need. Professional typesetters, business men and the casual publisher now have a high performance, low cost solution for every publishing problem.

MICROSOFT WRITE INTRODUCED FOR THE ATARI MEGA AND ST COMPUTERS

LAS VEGAS, NV. --Microsoft Write by Microsoft Corporation has just joined the growing ranks of high performance word processors for the Atari MEGA and ST computers. Used in conjunction with the Atari SLM804 Laser Printer, it provides yet another Atari desktop publishing solution.

Microsoft Write is powerful enough to handle complex business reports, yet simple enough for casual memos and letters. It adapts easily to writing and formatting requirements, so you can concentrate on what is important, writing and designing documents.

Microsoft Write has all the standard text generation, editing and formatting features; copy, cut and paste; plus: set page size, margins, and tabs by inch, centimeter, pitch or point; create footnotes with any reference mark; paginate automatically with numbers, roman numerals, or letters; print characters in bold, italic, underline, superscript, subscript or different sizes and fonts; create form letters or combine documents with a variety of print merge commands and create headers for the top or bottom of the page that print on odd, even and/or first pages.

Write also includes extra features that make word processing tasks easier and more productive. You can: display and work with multiple documents or parts of the same document simultaneously; choose from a variety of font styles (available with Atari GDOS); create glossaries of frequently used text that can be inserted with just a few keystrokes, control page breaks by selecting lines or paragraphs to stay together on a page and print text in columns.

Pull-down menus, help screens, and mouse or key control are all part of the exceptionally well designed user interface.

Microsoft Write will be marketed by Atari. Teamed with the Atari MEGA computer and the Atari SLM804, the desktop production of clean, professional documents becomes an easy task.

ATARI DESKTOP PUBLISHING SYSTEM

LAS VEGAS, NV. --The Atari SLM804 Laser Printer and the Atari MEGA or ST computers are one of the most advanced and versatile laser printing systems on the market today. For desktop publishing or writing the simplest letter, the Atari SLM804 Laser Printer delivers near typeset quality text and graphics quickly and easily.

Both the MEGA and the ST support the laser printer by building a page image in memory, then sending it to the laser printer over the DMA bus. This method cuts down on the time between pages. All laser printer manufacturers talk about "pages per minute." What is equally important is the build time per page and the transfer time per page. The DMA port allows data to be transferred at the full speed of the printer. Since the SLM804 uses the main computer's processor and memory, there is no need to receive the page, build it and then print it; the process of page building is much faster. The page is only built once, transferred and printed. It does not have to be built, transferred, accepted, rewritten or rebuilt and then printed. This is a significant time saving.

Another advantage of the SLM804 Laser Printer is memory. It has none. Because most other laser printers have a processor, they also have memory, which generally proves insufficient for the task at hand. To

do full page bit mapped graphics, a laser printer -any laser printer- must have a minimum of 1 meg of memory. Since most laser printers have only 512K or less of memory, memory upgrade kits must be purchased. Memory upgrade kits are expensive. The SLM804 uses the memory of the MEGA or the ST. With the 2 or 4 megabyte MEGA computer there is more than enough memory for graphics. And graphics are what desktop publishing is all about.

Font flexibility is yet another advantage of the SLM804. Most other laser printers have fonts in hardware. This limits the number of available fonts to the number resident in the machine or in some cases to the number that can be placed in a cartridge. The extra font cartridges are expensive, and again, limited to the number of cartridges available.

The SLM804 fonts are software fonts. There is no limit to their number, types or design. Since they are in software they can be much less expensive and can be designed by anyone. A feature not possible with most laser printer.

It is difficult to compare the SLM804 with any other laser printer. Since most other laser printers are hardware limited, their natures are fixed. The nature of the SLM804 is flexible. It can grow with you.

POWERFUL HARD DRIVES FOR MEGA SERIES

LAS VEGAS, NV. --The latest peripherals for the Atari MEGA computer line were introduced at Fall Comdex '87. They include a new line of hard disk drives called MEGA FILE.

MEGA FILE 20 The MEGA FILE 20 (20 megabyte) hard disk is the foundation of the Atari MEGA computer hard disk product line. Its specially designed case allows it to fit directly under the MEGA CPU. It also has an extra Atari 19 pin DMA connector for daisy-chaining.

MEGA FILE 40 The MEGA FILE 40 is

the 40 megabyte hard disk drive for the MEGA computer. Its case is also designed to fit directly under the MEGA CPU. Like the MEGA FILE 20 it is color coordinated to compliment the professional styling of the MEGA system configuration. It also has an extra Atari 19 pin DMA connector for daisy chaining.

Both the MEGA FILE 20 and MEGA FILE 40 are also fully compatible with the Atari ST line of computers.

Continued from page 4

786 (8 bits/pixel) color. This resolution will be beneficial in any CAD, color picture or graphic work. The 640 X 480 (8 bits/pixel /2 screen) resolution is perfect for animation work. The lowest resolution is 512 X 480 (32 bits/pixel 24 bits/true color plus overlay & tag bits). This resolution may be utilized for finely shaded pictures.

Additional ABAQ advantages include the ability to create a processor farm of upwards of 1000 processors, SCSI drive support, and a floating point processor built into the transputer chip.

The built-in floating point processor in itself is a great advantage. ABAQ offers calculating speeds a single processor workstation can't. The effect of these calculating speeds on any number of applications will be enormous.

ABAQ provides for the addition of up to three internal expansion cards. These cards may include up to 64 megabytes of addressable DRAM, or different graphics cards for specialty applications. The three

add-on cards may be configured as 12 + 1 transputers which would provide 130 MIPS or about 20 Mflops in a desktop package. The full buss and appropriate links are available. It also provides connections to parallel processor farms and links to fast peripherals such as a laser printer, disc server etc.

The ABAQ operating system is HELIOS. A multi-processor, multi-user, sympathetic to transputer architecture and familiar to Unix users. The user interfaces include X-Windows (Vers. 11), GEM-VDI driver, GEM under Windows and Shell. ABAQ works with the Atari MEGA Computer.

ABAQ utilizes a high performance transputer microprocessor with a reduced instruction set, capable of delivering computer power in excess of ten times a PC/AT. It is the most powerful single chip computer in the world.

Although the ABAQ transputer chip has a reduced instruction set, its instruction set goes beyond the traditional RISC (Reduced Instruction Set Computer). The

ABAQ transputer chip consists of a small core instruction set surrounded by collections of application specific instructions. Perhaps its key feature is the ability of the transputer to allow 100 or more transputers to connect together to provide a low-cost desktop computer with the power of a supercomputer.

With the advent of powerful 32-bit microprocessors, and advances in graphics hardware, a new generation of affordable powerful personal workstations has become possible. The systems will, it is predicted, provide an order of magnitude better price/performance than any personal computer currently being sold.

Using the transputer as the heart of ABAQ not only allows the production of a cost-effective advanced personal workstation, it also provides the ability to be able to plug in more power as needed. Such systems sets new standards in computing, providing solutions that previously required expensive mainframes, all on one desk.

ATARI INTRODUCES PC CLONE LINE

LAS VEGAS, NV. --Building on the introduction of an earlier Atari PC computer, Atari introduced a full line of PC compatible computers. Engineered to exacting standards, Atari adds what only Atari can - higher technology, all the options and better performance. At highly competitive prices. Value.

PC1 The Atari PC1 has a higher clock speed than most clones, running at a top speed of 8 MHz. For those software programs that are speed dependent, there is a software switch which sets the clock speed to the standard 4.77 MHz.

Through custom ICs the Atari PC1 provides EGA, CGA, Hercules, and monochrome capability without costly and confusing additions. Value.

The Atari PC1 comes with the PCM124 amber monitor. Unlike most monochrome monitors, the PCM124 can display up to 16 shades (of amber). The maximum screen resolution is 720 X 348.

The PC1 also works with any CGA,

MDA, EGA or multi-frequency monitor. Maximum color screen resolution of the Atari PC1 is 640 X 350. The color palette is 64 with a maximum of 16 on the screen at a time. Most popular clones have a color palette of only 16 and can only display 4 colors at a time.

The 256K dedicated display RAM makes the entire 512K of system RAM available. If even more RAM is needed, the Atari PC1 is expandable to 640K. The board also has a socket for an optional 8087 math coprocessor.

The Atari PC1 comes with a 5.25" internal drive. It can support up to 3 disk drives. The Atari PC1 will have a networking card running at 1 megabits per second (NETBIOS compatible).

The Atari PC1 comes with a mouse and a built-in mouse port. Other features include a parallel port, RS232 serial port, and an AT keyboard layout.

PC2 The Atari PC2 has all the features of the Atari PC2 and then some. It features

5 XT style internal slots for add-on cards, a real-time battery backed-up clock and room for internal mounting a hard disk drive or two floppy drives.

PC4 The Atari PC4 is an 80286 microprocessor based IBM PC/AT compatible machine. It features a selectable clock speed of either 8 or 12 MHz, VGA compatible video and has 4 AT style expansion slots, up to 1 megabyte of system RAM and is ready for an 80287 numeric coprocessor. Like the PC4, it also has a real-time battery backed-up clock.

The PC2 and PC4 can include any combination of 3.5", 5.25" or hard drives. The PC1 can use external drives only.

The Atari line of PC compatible Personal Computers offers all the features possible. Built-in, standard, ready to plug in and go. If IBM PC compatibility is important, then the Atari line of IBM compatible Personal Computers is the only alternative. Atari PCs - the best value in the IBM world.

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ST UPDATE

By Frank Sommers

LATEST NEWS IN THE ST WORLD

Fantasia or Farsighted?

Comdex - What Atari Displayed! -- In the eyes of the cynics it was a Buck Rogers, 25th Century show of things to come. In the minds of their devotees, Atari was clearly moving into high-end, very high-end computer machines. The Atari "islands" were tightly packed with eager people, eager to see the PC "line" of 5, the mighty ABAQ (which in Hebrew means "sand" (silicon) if you're a believer and "dust" if a doubter), the ST emulation of UNIX running with IDRIS, and all this capped with a music-playing CD-ROM for \$599, and a laser printer running *DESKSET* and spitting out copy of near Postscript quality.

Did all of this dazzle enhance or hamper Atari's image? The argument is hot and heavy and divided. But it did get them reported on in the media. The Washington Post had an article about the Comdex display of their wares, as did Info World, among others. Normally Atari doesn't make the computer prints.

Transputer & the ABAQ -- The pessimists suggest it may be a number of years before parallel processing software is a reality; the enthusiasts suggest that Helios, as an operating system is not that difficult to write for. Jack Tramiel's bold venture in inducing several programmers in England to combine the Kuma module which uses the Immos transputer chip with an ST computer and a graphic simulation may have been as "futuristic" as his crazy idea that he could cause an ST to "be born" in less than nine months. The "first computer miracle" is a reality in the homes of many of you who read this, and accepted as a machine ahead of its time. But the ABAQ? What's that? Well, in our world of "ad talk", the ABAQ could be "a second computer miracle". Those engineers who know the transputer chip point out that one ABAQ has the equivalent power of three IBM 386 machines linked together, if the latter could parallel process. Or if Atari is able to get the right hardware and software developers focused on the machine and its potential, in a matter of a couple of years ABAQ users would have the equivalent of a low-end Cray computer at their disposal, operating at 20 mega flops, the equivalent of 130 MIPS. (Cray computers cruise along at 47 mega flops.) The ability to add module to module, in ever increasing power means that the little ABAQ could easily be the equal of the 4000 by 4000

resolution graphics design machines used by Lucas films. A tiny step beyond even the resolution of Tramiel's secret 1280 by 940 hi-res monitor. So all of us who wonder where the gall originates from to introduce a "fantasy" machine called the ABAQ and have it appear believable, when 12 months ago the Mega ST was "introduced" and still can't be purchased on the east coast, except in isolated spots, may chose to water down our distrust with a bit of hope and wonder. After all Tramiel & Co. did gave us all a new future in Atari computing but a scant 20 months ago.

The PC's and The Wizard of Oz -- Once Dorothy got very close to the Wizard of Oz, it turned out to be no Wizard, just a silly nice old man. When you get very close to the PC1, the PC that most at COMDEX spurned because it was "non-expandable", you might be surprised. Inside that \$499 box that is "almost" available for sale everywhere in the U.S., after a year of waiting, is the built in capability for working either with Novelle networking environments (one of the best proven networking systems for the IBM) or with Jack Tramiel's christened "Moses The Promised LAN" system. When you consider the Novelle starter kit for an IBM costs about \$1100 you begin to sniff out why the PC1 could have "a whale of a future". Atari's claims that it can be connected to Mac's and IBM's and ST's (as soon as that Moses software is ready) is not an idle boast of tomorrow, apparently. The forced mistake of making it a "closed machine", because the FCC wouldn't license expansion slots because of unacceptable "leakage" (thus precluding any increase in price), may make it the big mover of the Atari PC "line". It is likely the only machine in the new line that will continue the "...Without the Price" motto. The others, the so called PC's 2-5 will have to be circa \$500 dollars below existing clones to be attractive competition, a neat trick with the already low-low clone prices. Samsung's entry into the 286 and 386 clone business should drive them even lower.

Laser, Laser, on the Wall -- The Atari laser printer was not a headliner at Comdex, but G.O. Graphics, in the desktop publishing island of the Atari exhibit, gave it a new "coffieur" and added sufficient style to draw in even the cynics. G. O.'s *DESKSET* turned font's of many sizes into laser print product nearly that of Postscript quality. Instead of costing \$150-\$200 per font,

the norm, G. O. remarked that fonts for the Atari would be \$50. Interest and enthusiasm mounted. Here was a PDL that could almost compete with the Dean of Script, Postscript. Not only that, but *DESKSET* was already up and running on the IBM, not a fiction, but a fact, and obviously it had already been "xeroxed" over to the ST, where it was running with grace and clarity.

But peel back a layer or two. If the Atari laser will sell for \$1995 what will *DESKSET* be priced at? No word yet, but it sells, for the IBM for \$2000.00. Likely nobody will know until Atari's LOI with G. O. Graphics (Letter of Intent) is turned into a contract. In the past this crucial last step either resulted in an agreement consistent with the logo "...Without the Price" or left the developer dizzy wondering how he had allowed himself to be so artfully mislead about the final profit spread. A query at the G.O. booth about the 7-font hand-out sheet entitled, "Above fonts are samples from Atari *DESKSET*" uncovered the fact that the set would cost not \$350 for the seven, but \$800 since each variation of each font, e.g. bold, italics, etc., also cost \$50. So where would you be in costs if you wanted to go DTP (DeskTop Publishing with Atari) and have, say, 8 different fonts, and *DESKSET*? Depending on the price of the latter, but say \$1000, 50% of what IBM user's pay, that would leave you only about four hundred dollars, below the cost of the leader of the class, the Apple Laser Writer Plus, with Postscript and 35 fonts built in. That also seems to leave us where we were in the desktop world of Atari bC, before Comdex, with Easy Draw, GDOS and a printer that only Mega ST owners can buy, since it depends on the memory of the latter to function. Finally, the 30-60 Atari lasers now in the warehouse will have been sold to developers when this appears; those for the rest of us may be available before the end of the year.

The Cement Causeway — There is one area where agreement, beyond the walls of Atari, is almost universal. Does Atari's preoccupation with penetrating the big world of business and "recollecting" the game machine market mean they are passing over what until now was their main base of support. It would seem so. Their leap frog from games to business has been described as, "One huge cement causeway right over the top of all of us, the ST users". Certainly the machines at Comdex and the understandable hunger to warehouse some of the money out there for game machines suggest that at least for now their concentration is elsewhere.

XMAS WARE

A quick survey suggests that the Christmas flyers in the world of software will be, as expected, mostly the top of the game line. The

recently golded oldies will be there heading the list, *FLIGHT SIMULATOR II*, *WORD WRITER ST*, *PRO COPY*, *PUBLISHING PARTNER*, and expect some newcomers. *TEST DRIVE* by Accolade is likely to be a hit. Certainly *GAUNTLET*, *DEFENDER OF THE CROWN* and *BARD'S TALE* will be plentiful around the Xmas tree. *WORD PERFECT*, despite its hefty price for Atari-ites has been selling (See Milt Creighton's review in this issue). Hopefully, *ADDICTBALL* will be ready in time for those of you who want something even more addictive than *ARKANOID*.

Miscellaneous

Oh, yes, The Blitter — Word in "the vale" is that rumours that the blitter is a paraplegic, i.e. only half there, have generated enough consternation within Atari to force them to get out their stopwatches. An "unimpeachable" source reports that if you take a long document and then scroll it with the blitter on and off, a stopwatch will show you the blitter is faster. Similarly if you place the smallest window you can make in the top right screen and then drag it to the opposite corner, again a stopwatch will show you the difference the blitter makes. Commentary from evesdroppers out there sums up, "If you need a stopwatch to tell you if the blitter is there, who needs the blitter?" More on this item next year.

Marketing

Oh, Come All Ye Faithful — Despite the debate on whether Atari will or won't produce the "new new machines", last years new machines are barely beginning to trickle into the dealers. Chicago at the moment reportedly has only one dealer, selling the Mega ST's. There are reportedly only seven Mega's in the State of Florida, primarily in the hands of developers, and of the half dozen Atari dealers in the Washington, D.C. area only one, CAL CCM, actually has Mega's for sale.

Wouldn't It be Wonderful — In the middle of last month, reports began dribbling in that a new slogan had been born at Atari Corp. As part of an effort to work with dealers on how to sell the Mega', it sounds like Atari is undertaking a policy "perestroika", or restructuring, as Gorbachev would say. All purchaser's of Mega's who require service while their computer is still in warranty, will be given a new machine, and their's sent back to the company, unless it can be repaired within two days. The new motto is STC, "Support the Customer", keep him happy and convince him support and service are immediately available! If it persists, this change in attitude could be far more significant to Atari's long range future than anything they showed at Comdex.

ATARIFEST '87

Were You There? Somebody from your club probably was!

by Georgia Weatherhead

I was saying some pretty nasty things about what I was going to do to Larry Shanks of Cal Com for having convinced me we should do a two-day 'Fest. It wasn't as he said, "The exhibitors do all the work." Getting the exhibitors to commit themselves to coming was six month's work up to three weeks before the 'Fest. After that, it was a problem turning them down for lack of space.

Even setting the date was a problem. Hotels in this area do not have the space we need, so we use a school. That means we have to watch the football schedule and the SAT exam schedule. We had to consult with the church that uses the school Sunday mornings. (Squaring things with the minister and vestry does not mean that the congregation will accept the arrangements.) Then we had the misinformation with the Boston showtimes.

Setting up the electricity for the exhibitors and the special telephone lines was no small feat either. Fortunately, we have among our members professional electricians and CNN TV technicians.

Free admission means we need to find a way to count attendees. The logical conclusion was to use numbered tickets for door prizes as the people enter. GREAT! Unfortunately, no one wrote down the first number. And then, some people didn't sign up for freebees. Yes, there are those Atarians that don't always look for the cheapest bargains! Again for the third year we must guesstimate attendance, but with perhaps more accuracy this time. My guess is about 2,000 came on Saturday and over 1,000 on Sunday.



Novatari Signs up New Members

AND they came from 27 states. East of the Mississippi they came from Massachusetts, New York, New Jersey, Delaware, Pennsylvania, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Ohio, Indiana, Michigan, and Illinois.

West of the Mississippi they came from Texas, Kansas, Nebraska, South Dakota, Colorado, Utah, Washington, California, Alaska and Hawaii.

Out of the USA they came from Canada, Germany, and Pakistan. This is one of the joys of this area. World wide travelers are always passing through.



Atarifest Crowds Search for Bargains



Joel, Jeff, and Dave Man the Mac Room



Dave Small Speaks at Saturday Seminar

The banquet on Saturday night was a reward for the workers that had assumed responsibility for the Fest for nine months - 25 of them. John Skruch of ATARI CORP was an entertaining, enlightening reward as the speaker. Guests were invited to make up the cost. We broke even.

The door prizes were fun to deliver. Earlier the winner of the ST had confided to me that he was perfectly happy with his 130 XE. It did everything he wanted. There was no need for him to go any further. After receiving his prize though, you should have seen him with his new toy, buying every public domain disk he could. His wife is now a happy owner of the 130 XE.

The 16-year-old winner of the color printer refused to come to the phone because his brother had answered it. Several hours later, he sheepishly called back long distance from Oakford, PA to accept his door prize.

Was your club here? 42 different clubs were represented at the signup map. ABC, ACES, ACE of Salt Lake, APL, AURA, BASIC, BRAG*ST, CHACE, DALACE, DUST, EAST, FACE, FLAG, GRACE, GRASP, HAUG, JACG, JBUG, LOCO, MACC, MACE, MAGIC,



Neil Harris, Bill Teal, Dave Small, and Joe Waters at Seminar on Market Directions

NAPCO, NAUG, NEPAUG, NCAUG (Canada), NOVATARI, PACE, PACS, PTAUG, RACE, RAM, SCAN, SJACE/SJST, SMAUG, SPACE, STAG, STATUS, TAABS, TCAUG, WACO, and WACUG. We were glad to see you, and you drop by any time you're in town. There's likely to be a meeting of some kind in the Washington Area.

That invitation goes to the Atari Corp or any of the software developers, too. If you need a tax deductible trip to Washington, we'll be glad to have you talk at a meeting.

Well, was it worth it? Some of the letters that came afterwards and the long distance phone calls just to thank us were great ego boosters. Some said they were overwhelmed with so much to see. They wished they had planned to stay two days -- one to learn at the seminars and demonstrations and the second day to gather the bargains.

The club members putting on the demonstrations said they were glad they had a chance on the second day to see the vendors.



Novatari Presidents, Ed Seward ('86) and Georgia Weatherhead ('87) Enjoy the Fest

Did we profit as a club? Yes, Novatari picked up 76 new members and renewed 31. Our public domain libraries brought in as much as the dues in a year do. Next year the smaller clubs in WAACE may follow Novatari's lead in gathering members at this time.

Did we profit as WAACE (Washington Area ACE, a very loose confederation of ATARI UGs)? We worked together for a year like we have never done before. We have a nest egg to begin Atarifest '88. WE have a new Atarifest '88 chairman, Gary Purington. Members are already contacting him to volunteer to work next year. We are looking for a place that will give us lots of space and will commit now to a date.

OK, LARRY, I APOLOGIZE. This is my public apology for all the awful things I was wishing on you for the three weeks before and during the Fest.

ATARI AT ATARIFEST '87

John Skruch's Talk at the Northern Virginia Fest

[John Skruch, Director of Software Development at Atari, was the guest speaker at the Atarifest Banquet Saturday night and then, again, during the fest on Sunday. The content of both talks was basically the same. Reprinted here are excerpts from John's talk. We join John as he is making his introductory remarks covering some of Atari's new 8-bit products. He is talking about the new SX Express telecommunications program..]

That product is, from our standpoint, mainly for the person that has an XM301 and would like a 1200 baud modem and we figured Express is THE most popular 8-bit terminal program so we did a deal with Keith. We'll be selling it and an SIO cable in a box for roughly \$20, you know, something inexpensive, to give people that capability of not having to use an interface module.

We're also in the middle of finalizing *Atariwriter 80* to support the *XEP 80* and *Silent Butler 80*. *Silent Butler* will be an upgrade of the existing *Silent Butler* program. *Atariwriter 80* will be a totally separate product....and work only with *XEP80*.... I have to apologize for a situation that I'm going to be assuming is a miscommunication, because the dealers here (Washington area) don't have *XEP80*'s and we've been shipping them for over a month. And the dealers have been sending people over to our display and saying "Here, talk to Atari about *XEP80*s," and then we turn them back around again and say "Well, we've been shipping them." Somehow the message fell into, maybe, the Mississippi and didn't get out here that we have had them in stock and have been shipping them. So, when I get back to the ranch on Tuesday, I will make sure that the folks in our branch that are responsible for the East coast get the word to the East coast. And I hope you do the same with your dealers because we do have *XEP80*s in stock and we have been shipping for a while. And it is just unfortunate that communications didn't make it this far.

How much do they cost?

The *XEP80*s are a dollar a column -- nice round figure. That's suggested retail; I have no idea what your dealer's are going to be selling it for, but our suggested is \$79.95.

The *XE Game System* has been shipping for approximately a month. It has currently out sold *XE* computers that we've been selling all year. We expect to sell roughly 120,000 units by Christmas time. The Toys-R-Us, the Kay-Dee Toys, the Line-O-Leisures of the world are just ecstat-

ic with it. It's blowin' off the shelves. If you are like me and just happen to, for some reason or another, watch Saturday morning cartoons, you will be seeing advertisements for the game systems.

(On software for the 8-bits)

It's a very strange situation and we're seeing the *XE Game System*, at least in the United States, as turning that around. Because the Broderbunds and the Electronic Artses and the Activisions of the world are saying, "No, we're not going to write for the 8-bit. We're only writing for computers or, machines, with a large installed base." To which point I remind them of the 28 million 2600s out in the world that nobody's writing for. That destroys that theory.

But they're real plugged in. It's like a rock rolling downhill. If it's not a 64, an IBM, or an Apple... But they are interested in the *XE Game System* because there is a new video game phenomenon in the United States. So they are watching with great interest how well the *XE Game System* does this Christmas to see if they want to start writing for it.

I noticed there was a review of *Ace of Aces* in your latest CURRENT NOTES. That's one that we just picked up and signed the license for from



John Skruch speaking at Atarifest Banquet

Accolade. There will be a cartridge version of Ace of Aces. The review was pretty good. It didn't mention the fact that the enemy airplanes keep appearing and disappearing on the screen. We don't know how Accolade let that go out but the cartridge version won't have that little bug in it. We also picked up the rights to *Mean 18 Golf* which has never existed on the Atari computer before and with the ability of us to do 256K cartridges, it should be a great game.
(About the Mega's)

Anyway, so much for the 8-bit line. In the Mega world, we've started shipping the ST2s and ST4s. There are rampant rumors running around right now about software that will or will not work on the Megas. There is a situation I'd like to explain to you, some of the inner workings of Atari and what we're doing as far as software compatibility just to, hopefully, give you somewhat of a comfort level that it's not like old Atari used to do which was not acknowledge that there was other software other than Atari software in the world and not acknowledge that there were other producers of Atari software in the world.

In my software test organization, there is a young lady by the name of Julie Wade. She's our ST software librarian. She's very much like a marine drill sergeant. She beats up on the developers and coerces two copies of every piece of software that they produce. We put it under lock and key in our ST library. When we do any kind of revisions to the ST series, either in hardware or software, we run every bit of that software through the machines. In fact, when we developed the new TOS operating system in the Megas -- which will also be in 520s and 1040s, by the way, as we run out of old TOS ROMS -- we ran every bit of that ST software across the machines. We spent, roughly, two months of the first part of this year doing that.

When we encountered a problem, we looked at our work on TOS. We looked at the software -- we have a very expensive 68000 logic analyzer in our lab. We'll take the software over to the lab; we'll run it; we'll find out where it blows up and what it's doing. We'll get in touch with the software developer, talk to them and find out how their codes operate. So we do work very closely with developers. And every piece of software that we found that has a developer-related problem is because they didn't follow the rules. And, unfortunately, that's sort of a trend in programming -- to find a neat new way to do something whether it's legal or not. And we don't do things like Apple which is demand that people follow the rules. If they want to break it, they can break it. We can't stop them. But something will happen eventually. We found that there was, in our library -- which has got, I don't know, close to 600-odd titles of actually produced commercial software -- there were very few

problems. The ones we did find, the developers are aware of. Like Publishing Partner, unfortunately, has a problem of writing beyond screen RAM, which is not a problem in a 1 meg machine. In a 2 meg or 4 meg machine, they go off the deep end and blow up. So, they're aware of the problem and they're working on the software.

The only person that's really going to have a problem, that we're aware of, is the guy that has a 520, a guy that upgrades to the new TOS ROMS, and a guy that wants to run a game that's an autoboot game that hogs up just every bit of RAM that's there, because the new TOS is 12K bigger than old TOS and that's because of the blitter support. I mean, we squeezed, we squeezed, we crunched, we squeezed ... it still ended up being 12K bigger. So, some games are having a problem. The one's that we're aware of we've talked with the developers. There will be fixes for that software where they may have to go out and, you know, hit the disk for an extra screen or something so that it will run on a 520. But the Megas and the new production 520s and 1040s are very compatible with the vast majority of software. Megas, like I say, are shipping. You do have them in stores out here. [Ed. Comment: As of Nov 20th, to look at only, demos not for sale.)

The blitter upgrade -- which I know a lot of people are interested in -- kind of a funny story on the blitter. It took us awhile to get our chip manufacturers to make us a blitter. It is a patented chip; it is a custom chip; it's a very complex chip. They finally got it right. That delayed Mega production for a bit until they did get it right. That's why developers did not get blitters in their first machines because the yield was very low and that's very normal for chips. But even with the yield we got, we still went through and tested them a second time. So, when we got Megas over here, we were pulling blit chips out, running them through an independent test organization, and putting them back in to make sure that they were totally copasetic.

We got all of the bugs ironed out of the system and now the blitter chips are working just fine and they are totally in production. But they are in a package -- which is what I call a "chiclet" package -- which is the square chip like the MMU and the GLUE chips in a 520 or 1040. So we said, "Look, guys, we'd now like it in a 68-pin DIP so that existing users can upgrade." This is a no-brainer kind of a chip package. They've been making this package for years. And they said, "OK, no sweat." They went off, put the blitter in a 68-pin DIP, brought it back, and we tested it. It didn't work. This has happened three times so far. So, we're still waiting for this 68-pin dual inline package. They're working on it. They could get it right any day now.

But, at this point, we can not tell you exactly when blitter upgrades and TOS ROM upgrades will be available because it's really dependent on the 68-pin blitter chip and, so far, they haven't been able to deliver the goods.

The IBM clone that we're doing, the PCI that you see sitting out there, will be available roughly in the November time frame. We have started shipping it in Europe. IBM said, "Nope, it's close to our PC. We're going to stop you at customs and not let you import this clone because of the BIOS." So, it cost us a month to rework the BIOS to make it not quite so IBMish so we could import them which is why you won't see them in the states until November. That's the bad news. The good news is that, when we did the tweak, we actually made it even a little more compatible. So, we're very happy that IBM stopped us. It cost us a month, but it's a better product now.

We will also be showing at Comdex a thing called a transputer. That is something that I really have nothing in the way of details on, nor was I allowed to find more details about it. Basically, we will be doing a machine that is based on RISC architecture and parallel processing. The idea is that if you need a computer to do a certain task, you plug in a computer board. If you need to do a larger task, just add on another board. And you just keep growing this computer to be as large as the task you need to do. This is designed to be essentially a central computer with STs as smart terminals for it. Details on it, they'll be forthcoming, but I did not come here with details.

When I found the news out about Federated, I immediately went over to Sam and I said "What a great idea." Because we had shut down our company store for employees about a year before that. We had a very small little company store. And I said, "Sam, it was fantastic. Love the idea of a very convenient company store. Where's the discount cards?" Haven't seen one yet, but maybe we'll get one. Long range plans would be that there would be Federated Stores across the United States.

Right now in manufacturing, we have one manufacturing plant. The old Atari had something like 12. That figure I'm not sure of, but I know we had plants in Ireland, El Paso Texas, Puerto Rico, Taiwan, Hong Kong, all over the place. They were under-utilized and right now our Taiwan facility is over-utilized causing some production delays. We're looking at building at least one more production facility, maybe two.

Anybody have any questions?

What will be the price of the new PC?

I can tell you the price of the new PCI, which is \$499 without the monitor and \$599 with the monitor. The one's that we'll be showing at Comdex I have no idea.

You're talking about, possibly, down the road, adding two more manufacturing plants. Any idea where you think you're going to build them or relocate them?

Well, there's a lot of factors that go into that and, you know, tax structures, transportation, all that sort of good stuff. We're a Nevada corporation. I'm sure that Nevada is talking to us in terms of advantageous things. So that would be definitely one place we'd be looking. One thing I've definitely learned in the past couple of years at Atari is that you can't second guess Jack and company. In terms of decisions like that, there's a very central core of folks that make those kind of decisions. I could potentially read about it in the paper at the same time you do. So, I'm really not sure.

(On Game Machine's Compatibility)

...I did away with my 130 in my office and am using an XEGS as a straight ahead computer. It's totally compatible. Old cartridges will work on it. Anything that works on an XE or XL will run on it. The new cartridges we're doing, most of the, well ALL the new cartridges we are doing will run on an XE or XL, some will work on an 800, some won't. As an example, *Flight Simulator II*, we did the 64K version of the product, not the 48K version of the product. If you plug that cartridge into an 800 it says, Sorry, this isn't an XL. But it will run on an XL or an XE. The main target unit is the XEGS and it's got 64K in it and, competing against Nintendo and company, we want to make sure that the games are as groovy as possible. So, we're saying 64K is the baseline.

What about the guns as separate units by themselves?

The guns as separate units by themselves after Christmas. We're doing that in Europe. In fact, there's about 8 different configurations of the XE game system in Europe. There's a straight console configuration, there's the keyboard separate, there's the gun separate, etc. Just until December, we'll be doing the gun as exclusive to the XE Game System. Then, in January, you'll be able to buy the gun and it will come with *Bug Hunt* which is the gun game that is in the XE Game System box.

What is Atari doing to overcome that image of a game system company. To relate a story, I work on computers as a technician in a computer store and they had a person come in from Symantec the other day and she was showing us Q&A. She said they're coming out with a Macintosh version. I said, What about an ST version. She said, What's

that? I wanted to give her a talk about Atari and I bored her to tears.

I understand. You know it's a real funny catch-22. We are definitely a video game company and definitely a computer company. In 1984, we're all sitting there going, Hey, we're a high tech computer company. That's all we're going to do. And people kept bugging us for 2600s. I mean, it was really a situation where people would bang on the door and say, We want 2600s. We go, Yeah, yeah, there's some in the warehouse. Here, take them. Go away. And we turned around at the end of that first year. We sold a million 2600s! And it was like a bother to do it. It was really crazy. And it's recycled into another "games are hot." Nintendo -- 400,000 systems in the United States this year, Nintendo systems. I mean, we're not going to walk away from that. The one thing we are doing is that rather than a video game company that happens to have a computer division. It's really separate. We have a separate group that's doing nothing but video games. I personally am in kind of a weird position because I'm in both the video game group and the computer group. Sam Tramiel in February says, Hey, by the way, we're doing an XE Game System and you're the product manager. I go, Oh, OK. I said, why? He says, Well, you're the video game guy. OK, great, I'm, the video game guy. So, now I'm in charge of video games.... What's the answer? We're both....

A while ago, we started hearing about the Mega STs and that there's going to be a big push and a lot of advertising and a big campaign on it. Now that the Megs are started shipping, when will we start seeing like television spots and advertisements and things like that?

They've definitely started. There's 16 major markets that we're doing advertisements in. The DC area is one of those. I have a hard enough time remembering when they're being showed in the San Jose area in California. I couldn't tell you what stations are doing what when. Definitely, independent local station coverage. The three ST spots are killers.

As far as the blitter chip and TOS upgrade, are you looking at a daughter board for that for existing 1040s?

Not a daughter board. It's soldered on top of the 68000. It's a more intimate relationship than a daughter board. (laughter) I think you have to bend up a couple pins and run over a couple of wires. When we have the blitter, we will then have a "blitter and TOS ROM upgrade" and here's a "ROM upgrade" for people who don't want the blitter. We won't do TOS ROMS before that. Frankly, because it's inefficient. Trying to run that down the channel and then run the TOS and blitter after that, it's twice as much work

for us. So, we'll wait until we've got the blitter thing set, then we'll do it. When? I'm not sure. Last estimate I heard was about \$125 to do the upgrade. And that's mainly because if you every tried soldering chip on top of chip in a 68 pin package you're talking some time. It's mainly a labor charge....

A while back an MS-DOS box with 512K was mentioned. Is that still in the works?

There's a couple different MS-DOS things in the works. Both hardware and software. And, to be real honest with you, I don't have details on where they are at. I'm just not sure....

Do you know how much the TOS ROM only upgrade will cost?

Well, the last TOS ROM upgrade we did, the initial production of that was \$20 if I remember correctly, or \$25. And that was because we wanted to get people out of the disks. So, we basically ate a portion of what that really cost us to get everybody up to a ROM set. It turned out that people bought, basically, twice as many TOS ROM sets as there were machines out in the world. We upped the price to \$60. So I'm figuring it's going to be somewhere between \$20 and \$60 for the upgrade.

How committed are you in the future to the development of the 68000 architecture?

How committed? Well, you remember me saying that when people fall over with fatigue, then they go hire somebody? Well, John Feagans, who is our technical support for third party developers just got an assistant. At Atari that's like, you know, a grammy award or something. So we now have twice as many people supporting third party developers just from a technical standpoint. Cindy Claveran is still running around like crazy with equipment and stuff. We're still up on CompuServe and Genie. We're still totally committed. The trick is though that as people get more and more familiar with the machine, the have less and less questions. On the XE, it's really the odd question as an example. On the 68000 based machines, as people are learning the systems it, again, becomes the odd question.

Can you give us any more information about higher-resolution versions of the ST?

Sounds like a great idea. If we did something that would extend the STs capabilities, we could call it the Extended ST which could maybe stand for the EST which could maybe have higher resolution and more colors and things. I think it would be a great idea for us to do.

CURRENT NOTES ST LIBRARY

[All CURRENT NOTES disks are \$4.00 each. Add \$1.00 for every 6 disks (or fraction thereof) for postage and handling. (Foreign orders add \$2.00/6 disks.) VA residents add 4.5% sales tax. Order from CN Library, 122 N. Johnson Rd., Sterling, VA 22170. Remember: CHRISTMAS SALE till 12/25: 10 disks for \$35 (+\$2 S&H); 30 disks for \$100 (+\$5 S&H). NEW disks are underlined.]

LANGUAGE DISKS

BASIC

- #22 - Sample Atari Basic
- #130 - GFA Basic No. 1
- #168 - GFA Basic No. 2
- #169 - GFA Basic Help Disk
- #170 - GFA Basic No. 3
- #184 - XFORMER (Atari XE Basic Emulator)
- #191 - GFA BASIC NO. 4 GFA "Tip" files #8-#11, paint program, 3-dim tic-tac-toe (mono), variable cross reference, line numbering.

C LANGUAGE

- #8 - Sample C No. 1
- #33 - Sample C No. 2
- #82 - Sample C No. 3
- #123 - Shareware C Compiler
- #133 - Sample C No. 4
- #156 - Sample C No. 5
- #171 - Sample C No. 6

CEM

- #86 - CP/M-80 Emulator TOS Disk
- #87 - CP/M-80 Disk #1
- #C1 - CP/M Telecom Disk
- #C2 - CP/M Utility Disk
- #C3 - CP/M-80 Games

FORTH

- #53 - ST Forth 83
- #71 - FortHmacs Ver 1.1

GEM

- #148 - GEM Tutorials No. 1
- #149 - GEM Tutorials No. 2

ICON

- #124 - ST ICON Language V6.3

MODULA-2

- #31 - Pascal & Modula-2
- #83 - Sample Modula-2 No. 1
- #92 - Sample Modula-2 No. 2
- #110 - Sample Modula-2 No. 3

PASCAL

- #31 - Pascal & Modula-2
- #49 - Sample Pascal No. 1
- #93 - Sample Pascal No. 2
- #111 - Sample Pascal No. 3
- #177 - Sample Pascal No. 4

SMALLTALK

- #97 - Little Smalltalk

XLISP

- #181 - XLISP Version 2.0

PICTURE DISKS

TINY COLOR DISKS (1-8)

- #40, #41, #42, #51, #52, #65, #75, #96

TINY MONOCHROME DISK #48

TINYPICS SERIES

- #108 - 1: Ghost Busters/Raiders
- #109 - 2: Empire Strikes/Shuttle
- #118 - 3: Science-Fiction
- #119 - 4: Transport
- #120 - 5: Cartoons No. 1
- #137 - 6: Cartoons No. 2
- #138 - 7: Animals
- #146 - 8: Famous Folk
- #161 - 9: Vehicles No. 2

CLIP ART

- #147 - Color Clip Art No. 1
- #158 - Mono Clip Art No. 1
- #159 - Mono Clip Art No. 2
- #160 - Mono Clip Art No. 3

SPECTRUM

- #182 - Spectrum Picture Disk

UTILITY DISKS

- #18 - Utility No. 1
- #25 - Degas Utility Disk
- #30 - Utility No. 2
- #36 - Desk Accessories No. 1
- #61 - Printer Drivers
- #63 - Utility No. 3
- #72 - Utility No. 4
- #73 - Utility No. 5
- #81 - Utility No. 6
- #94 - Utility No. 7
- #95 - Utility No. 8
- #102 - Utility No. 9
- #107 - ST Ram Disks
- #113 - Utility No. 10
- #117 - Desk Accessories No. 2
- #121 - Utility No. 11
- #127 - Font Editors/Loaders
- #131 - Utility No. 12
- #132 - Utility No. 13
- #144 - Utility No. 14
- #145 - Utility No. 15
- #150 - 1st Word Printer Drivers
- #154 - Utility No. 16
- #155 - Utility No. 17
- #162 - Hard Disk Utilities
- #166 - Utility No. 19
- #185 - Disk Utilities

GRAPHICS DEMOS

- #7 - Graphics Demos No. 1
- #64 - Doll Animation
- #66 - Globe Demo
- #67 - Ball/Bird Demo
- #85 - Sound & Graphics Demo
- #90 - Shiny Bubbles
- #105 - CN Movie
- #128 - Steely Boink
- #129 - Spheres! Demo
- #151D- Space Probe
- #172 - Juggler Demo
- #173D- Cyberscape demo
- #174D- Star Trek Animation
- #183 - SuperNEO Demo
- #193D- CYBER FAMILY DEMO NO. 2 Includes 4 Cyber animations: Sphere, Backflip, Bounce, and Anticado.

MUSIC PROGRAMS

- #34 - Deluxe Piano Player
- #60 - Music Studio Songs No. 1
- Digitized Music Demos: (DS)
 - #78D - Oxygen
 - #79D - Foreign Affair
 - #99D - Matt's Mood
- #114 - Music Studio Songs No. 2
- #134 - ST-Replay Demo
- #196 - CHRISTMAS DISK Delightful set of Christmas melodies along with seasonal pictures (Deck the Halls, Jingle Bells, Jolly Old Saint Nick, Little Drummer Boy, Silent Night, We Wish You A Merry Christmas)

TERMINAL PROGRAMS

- #43 - Terminal Programs No. 2
- #84 - ST TERM Demo Disk
- #88 - Uniterm V1.7B
- #142 - Terminal Programs No. 5
- #167 - Terminal Programs No. 6
- #180 - Starnet BBS
- #194 - VANTERM, Ver 8.6. Sophisticated terminal program which supports xmodem and ymodem and includes internal ARC support.

APPLICATION PROGRAMS

- #14 - NEOCHROME
- #59 - VIP Templates
- #152 - 3-D Control
- #163 - Editors (ProEDIT & ConTEXT)
- #165 - Library Programs
- #175 - ST Writer Text Ver 1.90
- #176 - ST Writer GEM Ver 2.30
- #192 - MICROEMACS, Ver 3.9 1/4. Latest version of this popular text editor. Includes MicroSPELL, a spelling checker for use with MicroEMACS.
- #195 - ATARIFEST/COMDEX REPORT Transcripts of 3 'fest seminars: John Skruch on Atari; Neil Harris, Bill Teal, and Dave Small on Market Directions; Kevin Mitchell on Desk Top Publishing. Plus all the major press releases on the new products introduced at the Atari booth at COMDEX Fall '87.

COMMERCIAL DEMOS

- #27 - dEMAN Demo Disk
- #28 - dEMAN Tutorial
- #39 - Arcade Demos
- #106 - Smooth Talker Demo
- #135 - Shanghai Demo

GAME DISKS

- #21 - Game Disk No. 1
- #37 - Game Disk No. 2
- #54 - Mono Games No. 1
- #62 - Hack Adventure Game
- #80 - Mono Games No. 2
- #100 - Game Disk No. 3
- #101 - Game Disk No. 4
- #112 - Game Disk No. 5
- #122 - Game Disk No. 6
- #139 - Mono Games No. 2
- #140 - Game Disk No. 7
- #141 - Game Disk No. 8
- #153 - Eamon Adventure Games
- #164 - Game Disk No. 9
- #178 - Breach Scenarios
- #179 - Kid Fun
- #186 - Monopoly
- #187 - WHEEL OF FORTUNE Ver 2.0. Includes 26 puzzle files (Beatles, Child, Clothes, Computer, Fauna, Film-Lit, Flora, Fun, OTbible, Software, Shield, Titles, US Air, Vacation, and Yum-Yum)
- #188 TO #190: unique course disks for MEAN-18, developed by Laky Antoniadis. Frank Sommers, who named each course, warns: "For the jaded professional or the courageous amateur, just the view from the tee makes your blood pump and your palms sweat."
- #188 - MEAN 18 COURSE1 (Cauldron, Peterpan, Princl8)
- #189 - MEAN 18 COURSE2 (Devil Driver, Forest18, HellHole)
- #190 - MEAN 18 COURSE3 (Agony18, Fireline, Watery18)

ST MAGIC DISKS

These disks are for use with the MAGIC SAC Macintosh emulator. All disks are in Magic format and tested to work with the Magic Sac.

- #M0 - Magic Sac, Version 4.52

TELECOM

- #M2 - Telecom Disk No. 1
- #M28 - Red Ryder Terminal Program

UTILITIES

- #M3 - Utility Disk No. 1
- #M5 - Disk Librarian
- #M8 - Desk Accessories No. 1
- #M9 - Utility Disk No. 2
- #M11 - Print Utilities
- #M18 - Desk Accessories No. 2
- #M27 - Utility Disk No. 3

GAMES

- #M4 - Game Disk No. 1
- #M6 - Game Disk No. 2
- #M7 - Game Disk No. 3
- #M15 - Game Disk No. 4
- #M17 - Dungeons of Doom
- #M19 - PCS Games No. 1
- #M20 - Game Disk No. 5
- #M21 - Game Disk No. 6
- #M23 - Vampire Castle
- #M24 - Deep Angst
- #M25 - Game Disk No. 7
- #M29 - PCS Games No. 2
- #M30 - Game Disk No. 8
- #M31 - Black Wizard
- #M34 - Game Disk No. 9
- #M36 - Castle of Ert
- #M40 - HACK adventure game. Disk includes manual with full documentation.

GRAPHICS

- Graphics Disks(1-3) (#M10, #M22, #M26)
- #M12 - MacBillboard (MacPaint clone)
- #M33 - Clip Art No. 1
- #M38 - VIDEO WORKS PLAYER NO. 1 PD player for Video Works animated screens. Includes 11 sophisticated movies.
- #M39 - DEMO DISK NO. 2 Demo versions of Anatomiser (educational program to teach human anatomy), DeskPaint (a MacPaint clone), and SuperPaint (MacPaint & MacDraw clone).

FONTS

- Font Disks (1-5): #M13, #M14, #M16, #M32, #M35

CN PC LIBRARY

These disks (all double-sided) for use with pc-ditto.

- #P1 - PROCOMM Ver 2.3. Terminal Program.
- #P2 - PC-STOCK and CARDEX
- #P3 - QEDIT, fast text editor.
- #P4 - PC-OUTLINE, Ver 1.05.
- #P5 - AS EASY AS (Lotus 123 Clone)
- #P6 - PC-DBMS, Ver 1.2, FLOW CHART UTILITY, and MORTGAGE CALCULATOR.
- #P7 - EASY BASE and HOME BANK BOOK
- #P8 - TIME SAVER and PFM, Personal File Management System.
- #P9 - DRAW POKER, V1.0 and MS-TREK V1.0
- #P10 - ZIP - The Ultimate Utility
- #P11 - A.D.A. PROLOG, Ver 1.90
- #P12 - FREE WORD, Ver 1.0 PC Word Processor
- #P13 - VISIBLE PASCAL.
- #P14 - KIDGAMES (Collection of games geared toward ages 2-10.)
- #P15 - FAMILY HISTORY is noteworthy among computerized genealogy programs.
- #P16 - PC-FILE III allows you to quickly retrieve data, change it, perform queries, and prepare reports.

IT'S A SMALL WORLD

By Dave Small, (c) 1987

THE NF's, NT's, SP's, and SJ's

If you'll stick around with me through a little psychological talk, I'll tell you the single spookiest thing I know about programmers -- and the thing that bodes the most ill for the computer industry. And I will finally answer my own question, from a previous column: "Why don't women like computers?"

In the 1920's Carl Jung came up with an interesting theory: there were personality "types" which people were born with. People can no more change the "type" of person they are than change the color of their eyes. Jung also noted that the wise old Greeks "just happened" to have made some of their Gods into exact profiles of a given personality type: for instance, Prometheus was the type NT. In short, the Greeks recognized the differences in people and symbolized them in their Gods.

(The theories were pretty much forgotten after the 1920's, which isn't surprising given the turbulent events of the 1930's - 1940's.)

In the 1950's, Jung's theories staged a comeback. Two rather bright people, Isabel Myers and Katheryn Briggs, used Jung's theories as a basis for classifying people into groups. They came up with the Myers-Briggs personality indicator. Since then, this indicator has become a leading personality type yardstick, used by many psychologists.

The type breaks down into four letters. Two of them show the basic type, the others are sort of modifiers applied to the basic type. The four types, along with the percentage of population they represent, are:

NF:	artist writer actor	iNtuitive/ Feeling	10%
NT:	architect programmer	iNtuitive/ Thinking	10%
SP:	performer worker	Sensory/ Perceiving	40%
SJ:	manager member of structure	Sensory/ Judgemental	40%

Now Myers-Briggs never claims to describe a person exactly. You can't. However, you can

gain a certain overall understanding of them, which can help you when dealing with a certain type of person. Let's look at the types:

The Types

Essentially, the "N" describes if you're more comfortable with intuition, those thoughts that come from the inside, vs. "S" describing a person more comfortable with sensation, and things that come from the outside. For instance, a poet is very intuitive; a performing rock star, very sensory.

The "F" and "T" tend to describe how you make decisions. An "F" indicates the decisions are based on feelings, emotions -- the "gut feel". A "T" indicates more logical thinking, decisions based on procedures and logic. (I'll skip on the P and J right now since they're not the concern of this article).

In a book called Please Understand Me (Prometheus Press, 1984), by David Keirsey and Marilyn Bates, these personality types are discussed at some length.

This is a fascinating book. It's probably the best book I've read in the last ten years. While I had known that people were different, I'd never read anything that indicated *how* they were different.

This book has quietly sold many, many copies. It's at most bookstores because it's a steady seller, which is quite unusual in the book business. I found it at "B. Dalton's"; I know it's in other nationwide book chains and in libraries.

If you'd like to find out a lot about yourself, and a lot about other people, check it out. It's the best advice I've ever given a fair number of people, so I'll pass it on.

It helped me a great deal personally. For instance, my personality came out as "NF" (a writer) -- some 90% of all writers are NF's. No big surprise there, right? But NF's have personal goals that are meaningless to the other personality types. A good example is the phrase "search for yourself"; if you're searching for yourself right now, you're probably an NF. If you think that phrase is inherently silly, you're probably not an NF. It only has meaning to the NF personality.

Remember Bill Murray's movie about "a man in search of himself"? Only 10% of the population could relate to that. It bombed, as I recall.

But until I found out that 90% of the population didn't think the way I did, I always wondered who had the screw loose, myself or the rest of them. Now I can understand how I'm different than the majority of people and deal with it.

The two minority personalities, NT and NF, represent 10% of the population each. NF's tend to be artists, writers, actors, very creative folk.

Then there's NT's. The "T" means thinking; it means NT's make decisions based logically. NT's are fond of numbers, math, black and white portrayals of the world. Scientists are classic NT personalities. They often have very digital-seeming opinions, seeing the world as being absolutely one way or another, never in between. Robert Heinlein is a classic NT-style writer and is beloved among NT science fiction fans for it.

A classic NT saying is that software is either "a piece of crap" or "insanely great" -- never anything in between ("it's so-so"). Think of your last user group meeting... those phrases ring any bells?

NT's tend to be rather cool and aloof seeming people (although they certainly don't feel they're acting cool and aloof!) This perception makes other people often consider them quite arrogant. NT's also like technical documentation. They just love figuring out how things work, and telling you about it *in depth*. Finally, NT's love logic puzzles. A murder mystery is a delight to an NT -- who dunnit?

Lest anyone say I'm not qualified to say what NT's are like, allow me to point out I'm married to one, and I work with two of them daily.

A Spooky Statistic

I was fascinated with this book, as I said. So I began to bother my friends and to run this profile on them, from that same book. Since I travel in computer circles, this included a lot of programmers.

And every one, *every single one*, turned out to be an NT. This is absolutely incredible; NT's are a minority in the population. You'd expect to find only 1 in 10 persons being an NT.

This statistic has lasted for two years!

And this is the spookiest thing I know about programmers.

I happen to be the only programmer I know that's an NF; I also happen to be the only programmer I know that writes about computers.

And I have never found a computer user that is an SJ or an SP -- and those are 80% of the general population.

Folks, this means that the people writing software are NT's, with all the good and bad points of NT's.. They are going to bias their software, even if they don't mean to, towards the NT personality; it will seem reasonable to them, after all.

So you're going to see software with lots of logic puzzles. (Think of adventure games like Zork). You're going to see the world portrayed in numbers. (Think of role playing games, where your "strength", "charisma" and such are represented by numbers). You're going to see lots of apocalyptic games, where either you win or lose 100%, with no inbetween. (Think of arcade games). Spreadsheets, databases, word processors, geared towards technical applications that can be represented in numbers.

You're going to see lots of "infinite detail" sorts of things that NT's love, like the "C" language -- needlessly and pointlessly complex, yet a joy to someone who likes logic puzzles. Ever seen a book called "C Puzzles?" It exists. Ever seen a "C" programmer ask another, "What does this do?", to show off a particularly weird piece of code? I have... in fact, "C" approaches being unusable for me.

Any of this sound familiar?

Now think of your technical documentation. An NF writes tech documentation like this:

1. Stick the disk into the disk drive.
2. Turn the machine on.

and so on. Generally they talk about what the software will do for you.

An NT writes tech doc like this (remember, they want to tell you -everything-.):

1. Insert the diskette into the disk drive. The diskette is composed of ferric oxide, which can be spot magnetized. It rotates at 300 (three hundred) RPM, and the data rate is 1 microsecond (.000001 sec) per cell time, which is 250 (two hundred and fifty) khz. There are 80 (eighty) tracks on the disk, and 10 (ten) sectors per track... (then, about five pages later),
2. Turn on the computer. Do this by depressing the rocker switch located two inches from the top of the back cover (as measured from the

top) until you feel a firm 'click'. At this point, the fan should start revolving...

Does this sound familiar? If you've read anything from IBM, TI, CDC, HP, it surely does.. for the folks writing that technical documentation are NT's.

And this, I feel, is the reason the general populace — the other 90% of us — consider computer documentation to be uniformly ghastly. The NT people writing it are writing it for themselves, and they don't have any idea it's not what the rest of us want. In fact, that idea never even occurs to them. Why, it's not reasonable that someone wouldn't want to know everything about the computer; it's not reasonable, to an NT, that someone would want to know just enough to "make it go".

Anyone who's been around us at Data Pacific tends to hear these NT/NF terms a lot. It's become part of our private lexicon here. And it's helped us to get along. My partner's an NT, I'm an NF, and we have disagreeing views about lots of things. But understanding that the disagreement comes from a different way of looking at the world makes it all tolerable; instead of some bizarre, unexplainable behavior on the other person's part, it becomes simply part of who they are.

For instance, I might want to wax lyrical on the back of our packaging. So I write a little story about the Sorcerer's Castle, the Magic Sac, and so on. Now my partner isn't into that. He wants NT detail back there. He wants the buyer to know all about the Magic Sac, the system hardware requirements, RAM size, disk drives, et al. Numbers.

So we compromise. I get half the page, he gets the other half. He understands I write the way I do because I'm an NF; I understand his need for detail, because he's an NT. He also tends to nitpick manuals; this would drive me absolutely crazy if I didn't know he was an NT.

If you really want to know how Data Pacific gets along so smoothly, read this book; the principles within work. I'll also mention briefly that I married an NT, and we didn't really get along until I read this book, and could see her personality (which was most frustrating for me) described there; it fit her perfectly. (She has a Computer Science degree...)

For the first time, I could see she acted the way she did because she was born that way, and vice versa. By golly, she wasn't just being that way to irritate me.

It made a big difference.

We've just grown out of the first generation of computers, which were NT puzzle delights. IBM DOS, for instance, is one hopeless logic puzzle. And we've seen the general populace get told that computers are important. What happened? The big crash of 1984 in computers, when that same populace decided that computers weren't interesting, despite all the hype. Imagine the frustration of the NT computer designers, who couldn't see why the general populace wasn't turned on by these machines.

Just think — all those computers for 10% of the populace.

My personal belief is that the Apple Macintosh succeeded because it was the first computer that NF's enjoyed using. Think of the people you see that classically use the Mac. Artists. Musicians. Graphics designers. These are NF's pretty much exclusively. They don't enjoy trivia games with DOS, knowing that one little unknown command that makes DOS work, and so forth. Most of them probably don't know that a disk is made out of ferric oxide and has 80 tracks; they do see a little painting in a little disk "window", and can "click on it".

No NT-style endless detail or puzzles, that NF's detest...

And my other belief is that no one has invented a computer that the rest of the population — some 80% — will use. Oh, perhaps a worker, if forced, will use a word processor. Perhaps a manager, if forced, will use a spreadsheet to help them manage. But it's rare. And it's sure not going to be a hobbyist kind of toy for them.

So we've managed to hit 20% of the populace and left 80% cold. My parents have a computer; it's sitting in a closet right now. (They are not NT or NF people). I bet you know lots of people who feel the same way about computers.

The personality profile also explains a little bit about why programmers and artists are classically hard to manage. NF's/NT's and SJ managers are coming from two different points of view. Neither has any idea of the other's personal goals. For instance, SJ managers tend to regard NF's as "artist flakes", and NT's as "arrogant programmers". NT's have no idea why the manager wants something on time, instead of done *right* in all the details. And NF's have no idea why a manager wouldn't care that the packaging is so downright ugly, so non-artistic.

I've seen this happen at programming shop after programming shop. It's one of the big reasons that programming companies fold up.

Sadly, programmers also tend to be pretty unhappy people. They've grown up isolated; only one person in ten is anything like them. In high school they tend to be pretty lonely, regarded as "Brains" and the like. Only in college do they tend to find more people like them.

So they tend to withdraw into themselves, or become chilly and arrogant towards a population they consider as irrational. Computers provide a perfect home for these people; computers are always rational, logical, and play by the rules. People don't.

At the recent HackerCon 3.0, I saw many, many unhappy NT programmers. They were happy at the conference because they were with other NT's; they could open up a little. But you could see them returning to a pretty isolated life after the conference. And yes, the words "piece of crap" and "insanely great" permeated the conference.

And I also met the (former) editor of a computer language journal, who was depressed, wondering why computers, and the people there, had become so dull to her. I told her about this book; she ended up as an NF type personality, definitely not an NT technical writer.

How to Write A Script

TV scriptwriters have found that if you stick with a classic portrayal of a personality type for a character, you'll find people of that type will quickly relate to that character. One of the unknown things about Star Trek, one of the reasons for its rabidly loyal viewership, is that it sticks very closely with all the types, giving each person someone to relate to. (This is a big problem with the new show, in my opinion -- they broke that rule. It could have been the original Star Trek happened on this accidentally).

There's Kirk, the SJ manager, the upholder of societal institutions. There's Spock, the classic NT. There's McCoy, the NF. And there's Scotty and Sulu, the SP's.

See if this brings back any memories:

"Spock, you green blooded, inhuman Vulcan ... how could you not care?": The NF McCoy.

"Really, Doctor. (Raises one eyebrow). So illogical": The NT Spock.

"Gentleman, let's get back to work. Warp 9, Scotty.": The SJ Manager Kirk.

"Aye, aye, soor.": The SP Worker Scotty.

Does this ring any bells? The scriptwriters usually did this at least once per story.

Sounds like pretty classic personality types stuff to me.

Authors use this as well. In the fourth book I did, "White Sorcerer", which wasn't good enough to publish (well, that's the breaks), I tried to pattern characters on these styles, to make them seem more realistic, because real people act the way the book says. Other authors say it better than I do, some instinctively (like John D. MacDonald), others more overtly. That's why they get published.

Conclusion

Well, there you have it, a quick introduction to Myers-Briggs and why it's probably relevant to you. If you're reading this, here in CURRENT NOTES, *you're probably an NT*. Tempted to instantly dismiss this article as "a piece of crap"?

Bingo.

I will say, in my own defense, I found it extremely difficult to condense an excellent book into this article. Yet if it inspires you to pick up "Please Understand Me", if at least to see what I'm talking about, then you'll be way ahead for having read it. This is especially true for NT programmers wondering what on earth is wrong with other people, their boss, wife, and so forth.

Nor will I present any sort of questions that would help you determine, quickly, which type you might be. That's up to the book; it's written by better people than I. A pretty good Myers/Briggs profile is on page 2 of the book.

And now I'll give the "something to think about" answer to a previous article, "Why Don't Women Like Computers?"

It's a trick question. Some women DO like computers. NT's. But 80% of women don't, just as 80% of men don't. If you're an NT woman, you probably would enjoy computers. (I certainly had enough NT style letters from women telling me so, in classic black and white NT terms. "Your article was absolutely wrong... we have lots of women in our user group... etc, etc.").

Now, as for how an NF like me became a programmer.. well, that's another story. In fact, I'll get to it, just as soon as I finish "searching for myself" ...

A Merry Christmas to All! Have a happy holiday season, and we'll see you next year.

CD REPORT

By George Langworthy, (c) 1987

OPTICAL TECHNOLOGY AT COMDEX

The Fall 1987 Computer Dealers' Exposition, COMDEX, featured many new and improved products in what now can be called the "very high density, very low cost storage" market. Atari Corp. showed an ST and an IBM PC type CD-ROM drive with audio to list for \$599. Several vendors showed 5M", 12", and 14" write once drives and media. The first USA demonstrations of "almost ready to produce" erasable optical disk drives took place on and off the floor.

CD-ROM Disk Drives

Atari Corp. had a production version of their CD-ROM drive. It was demoed as a prototype at the June 1985 Consumer Electronics Show in Chicago. The ST version plugs into the Atari Direct Memory Access (DMA) port which is similar electronically to the Small Computer Systems Interface (SCSI) used by the Apple Macintosh. The Atari CD-ROM drive has a DMA out plug, allowing daisy chaining of CD-ROM, hard disk drives and their laser printer. Delivery is planned for March, 1988. Delivery of a card that would allow the Atari drive to work with their PC line is expected at about the same time.

An Atari Corp. spokesperson stated that a Chinon (Japan) CD-ROM mechanism is used and that there would be more than one supplier. CD stereo output is provided. A remote control audio device about the size of a cigarette lighter is an unusual feature. Estimated dealer discounts are in the 30% range.

When Atari showed the prototype in 1985, they announced a \$500 price. Component costs are now reduced to allow the \$599 list price which makes Atari Corp. the price leader for IBM and non-IBM formats. Using the 520 STFM at \$799 list, a complete monochrome, high-resolution station would sell for under \$1,400.

The vertical application systems market is going well for CD-ROM hardware and content suppliers. The consumer market, three years after the first Sony and Phillips CD-ROM production models were shown, awaits a package of CD-ROM data bases in a price range of interest. This author believes it will take 10 products, each selling for under \$300 per set, to interest significant numbers of consumers. To date only two exist. The Grolier *Electronic Encyclopedia*, \$299, and Microsoft's *Bookshelf*, \$295. Bookshelf gives online access to 10 reference works of interest to writers and office word processing people.

Two competing cartridge or caddy enclosures for holding the CD-ROM disc free of fingerprints surfaced. The Sony cartridge is something like the "jewel box" now used to store Compact Discs. The Sony proposed standard cartridge has a rotating center and mechanical metal slide. The cartridge containing the disc is placed into the drive and remains as part of the system.

Hitachi, Japan Victor Corp. (JFC), Panasonic, Sanyo and Toshiba showed their second generation 1/2-height drives with the Sony cartridge. Because it has both metal and plastic parts and a moving bearing, this must cost several times as much as the IMS Philips caddy, described below.

Laser Magnetic Storage (IMS) uses a simpler CD and CD-ROM disc holder. It is a caddy/cartridge consisting of two halves and two plastic fingers. The disc is stored inside. The caddy is inserted in the drive slot and the CD is caught by the drive. The caddy is removed and later inserted to retrieve the CD. It is a much simpler mechanism and system than the Sony. It appears to be much more suitable for audio and data "jukeboxes" which would hold 10-50 CD's because of its simplicity, low cost and light weight.

October 28, IMS announced that they had received a multi-million dollar contract to supply Hewlett-Packard with 1/2-height drives and cartridges using the new IMS caddy. HP will install the IMS drives in their Vectra PC's and IBM PC/ATs to provide access to HP computer application support information. Text, illustrations, charts and graphics can be accessed in seconds. User manuals, application notes, and product catalogs are publications included. A CD-ROM a month will be issued. HP believes it is the first to market a computer end user information service on CD-ROM.

WORM Optical Disk Drives

Companies showing their new or improved 5 1/4 Write Once Read Many (WORM) optical disk drives included Hitachi, Laserdrive Limited, Maxtor Corp, Mitsui Comtek Corp, and Optotech, Inc. SCSI, IBM compatible, and proprietary interfaces are used. There is an International Standards Organization (ISO) specification for 5 1/4 drives and media. Some manufacturers stated adherence to that standard for their drives or media.

Laser Magnetic Storage (IMS) showed it's new 1200E 12" unit, suitable for "jukebox" applica-

tions totalling up to 20 two-gigabyte disks. Both the media and drive mechanism have been improved from the previous model. Toshiba America showed a two gigabyte per side 12" system, a second generation product. Eastman Kodak brought out it's giant System 6800 capable of several "boxes" of up to 340 gigabytes each. Needless to say, giant dollars are required as well for this mid-1988 14" disk based WORM system.

The WORM market appears to this author to be healthy, with the numbers of suppliers, the prices and the quality of product all showing marked improvement over 1985.

Erasable Optical Drives

Sharp Electronics Company showed a rare earth transition metal alloy over strengthened glass substrate 5 1/4" product. The 211 megabyte per side product is expected to be available in production in mid-1988. Sony Corporation announced a 325 megabyte per side 5 1/4" erasable drive. A magneto-optic layer is placed over a polycarbonate substrate. Both the continuous composite format and the servo damped format are supported. Verbatim, an Eastman Kodak Company, again showed it's 3 1/2" erasable drive, expected by June 1988.

Several major factors affecting erasable optical disk (EOD) systems are not resolved. Which drive technology will give lowest reliable costs? Which media technology will give the best combination of low cost, best archival life and greatest number of erasures? And which manufacturer(s) will be able to best present their side of the story to the end users?

Data-DAT: New Baby on the Block

Hitachi was the only company to show officially a computer peripheral version of Rotary Digital Audio Tape, "Data-DAT." Look for samples in the second quarter of 1988 and production in the third. No pricing was discussed. The enclosure shown and Data-DAT drive were engineering feasibility models. The matchbook-sized cartridge and high density helical scan 3.8mm tape drive easily fit into the 3 1/2" personal computer disk drive form factor. With a tape length of 60 meters, you have two hours of CD quality audio or 1.2 gigabytes of formatted data.

Data-DAT drives are like miniature VCRs, employing the well known and high production volume helical scan technology. Rotary DAT recorders, the only type of DAT available now, can cost less than VCRs, when the same production volumes of millions per year is reached. Prices could be in the \$500 range by Christmas 1988 for consumer audio DAT recorder/players. Current prices are \$1,200 in Japan.

USA introduction awaits either a stalemate, or resolution of a long standing dispute between musical material copyright owners, and, on the other side, equipment and media manufacturers, dealers and consumers. This dispute centers around who gets what percentage of the revenue from recorded media, blank media and DAT tape recorders. Copyright holders want a third system of copy protection built into DAT recorders, in addition to the two already in place. This has slowed audio DAT sales, which has slowed Data-DAT development and introduction.

This author believes that Data-DAT will give optical erasable systems serious competition in all applications NOT requiring on-line, real-time access to data. This includes backup, archiving, data distribution and both text and multimedia publishing. Why?

Erasable optical technology is untried. When introduced it will be more expensive than write once optical. Formats and media will be incompatible, unless a strong standards effort appears. The unknown fear factor, which may well have delayed implementation of CD-ROM will certainly be there. Until consumer audio and video versions of EOD are in full production, media costs will be ten times that of Data-DAT.

For example: WORM media is \$100 list for 400 MB which is \$0.25/megabyte. A DAT tape is \$20 list for 1,200 MB, or \$0.017/megabyte. Early EOD media could well be more expensive than for WORM. (By contrast, data storage on your 3 1/2" floppy disk cost about \$3.00/megabyte.)

Data-DAT tape drives will benefit from the consumer market production volumes and attendant cost advantages over computer peripheral devices. This means that Data-DAT tape drives could sell for 20 to 50 percent of EOD initially. Data-DAT will also impact CD-ROM and WORM markets. Current audio DAT specifications include a three hour audio version that would hold 1.8 gigabytes, more than 3 times that of a standard CD-ROM. Data-DAT has no mastering charge, and can be replicated with two Data-DAT drives. Data-DAT media is erasable, and thus reusable. Data can be modified and added to, as in any magnetic tape drive system.

The higher WORM drive and media costs may mean that Data-DAT becomes the medium of choice for low access archival applications. This is not to discount the advantages of CD-ROM and WORM systems in some applications. It is only to suggest that Data-DAT's enormous capacity and potential very low drive and media cost may impact all optical storage and retrieval systems.

TIPS'N'TRAPS

By Jim Stevenson

It seems we have a slight lag in the amount of Q & A's this month. There are two reasons for this. First, this article was compiled and written during the month of AtariFest '87, which would make people too busy to worry about leaving messages on the board. That's ok. I went to Fest myself and it was the best I've seen so far. Second, ARMUDIC BBS is getting NO messages at all now. It used to have only about 1 a month, now ... nothing! I know a few of you that are on E.A. & M.L. are also on ARMUDIC. So give it a call and start filling the base.

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Return of Heracles

Q. Where is Penelope? I know that's the 12th task, but I have found no way to get to her. I only have left to rescue Helen, kill the four horses, and rescue Penelope. -"The Archer"

The Lurking Horror

Q. Does anyone know how to get through the maze once you've gotten by the urchins with the wires on their heads? -"The Archer"

Q. Okay, I figured out the wax bit (I eavedropped on tips you and others were sharing). What is that man supposed to be? I chop him in the chest with the axe and he stares at it quizzingly!

What am I supposed to do about the Funny Bones, Chinese food, and the Coke? I mean, if you don't eat them you get tired quickly.

Ah, what about the professor in the Alchemy Lab? I would like to go into the next room but he won't allow me to go in. -"Zor Prime"

A. Ok, the bones and the coke are to help you stay awake. Put the chinese food in the microwave, set it for five minutes, then after it's done, give it to the hacker. Then ASK HACKER ABOUT KEYS. Then, HACKER, GIVE ME MASTER KEY. Next, the alchemy lab. Have you been on the great dome? If not, go there. Otherwise, show the message to the professor. -"The Archer"

Q. I figured the door out already. Now, I gave the note to the professor and he led me into the archway and into this pentagram, where, later, the monster killed me...Well? Also, where do I find the hand, the bird, and the tree? I never remembered seeing those! -"Zor Prime"

A. Once in the pentagram, Z twice. Then CUT LINE WITH KNIFE. Then, EXIT PENTAGRAM. Try and figure out the rest, and look for a 'trap'.

- "The Archer"

Leisure Suit Larry

Q. Is gambling the only way to earn money? Where can I go besides the store and casino? Where do I go in the casino? Do I have to buy anything besides "lubbers" and wine? You get the picture. I'm lost! -"Nicodemus"

A. Store, casino, bar, chapel, disco. Go to the casino, continue back towards the edge of the room, go to the trash can in the next room, and there should be a something. The casino is a pain but very necessary. Umm what else to buy at the store? There's always magazines [points] and perhaps a thing or two, 'lubbers' and wine is all you really need [I think]. Also, at the bar, don't forget to order a whiskey, and don't drink it. Give it to someone who looks like they could use one. -"Jack Flack"

Q. How do you escape from Fawn when she ties you up? -"The Archer"

A. Remember the convenience store? Or rather. Right outside of it? If you remember you'll know you had a visitor. If you give him something which can be bought in the convenience store, he will give you something in return. The something he gives you will get you out. -"Jack Flack"

Stationfall

Q. Has anyone out there gotten more than 23 points on Stationfall? If so, I would like to ask the following: (1) Where is the platinum? (2) Where is the FREZONE (tm) Liquid Gorzium Explosive? (3) Where is some money? (4) How do I find the combination to the Station Commander's safe? (5) How can I stop Plato from shootin at me? -"Max Quordlepleen"

A. (1) In an archaic place. (2) In a cold place. (3) In a safe place. (4) You don't find/need it. (5) Floyd can help. -"Allan Jespersen"

Q. Can anyone tell me where I'm supposed to take the space truck at the beginning of Stationfall? -"Jan Meisler"

A. Read the form QX-17-T (from the box that you BUY). -"Allan Jespersen"

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ADVENTURES IN THE MAGIC SACDOM

By Jeff Greenblatt

A GLIMPSE AT THE TRANSLATOR

If you attended the Washington area Atarifest then you probably had a chance to get a peek at the Translator for the Magic Sac. The Translator is a device that allows a Magic Sac equipped ST to read/write Macintosh formatted disks.

On Saturday morning of the 'fest, I finally got to meet the Magician himself, Dave Small, and his partner Joel Rosenblum. Both of them were dressed in official Data Pacific attire; tee shirts with Magic Sac emblems and jeans. Actually, I'm jealous, I wish I could dress like that when I'm working.

The next thing I knew, my ST was connected to a prototype of the Translator. The enclosure of the Translator consists of a grey metal case which is a bit smaller than a disk drive. The top of the case has the words TRANSLATOR ONE and a rather large digitized Rabbit in red paint stenciled on it (the Rabbit being the Magic Sac logo). The front of the case has an on/off switch with a led power on indicator integrated into the switch. The rear of the case has 5 sockets for the power supply, midi in and out, and disk drive in and out cables. The power supply is of the AC adaptor type commonly found with modems that plug directly into AC outlets. The case is not vented. Over a two day period of being constantly on, it was slightly warm to the touch; the first day it was on for 8 hours. Since it runs cool, it appears that it can be placed just about anywhere, subject to the length of the cables.

My 520ST (1 meg upgraded) was plugged into the Translator from the midi in to midi out ports with standard midi cables. The two disk drives I brought were daisy chained to the Translator which was connected directly to the ST's disk drive port. If you have a 1040ST it plugs into the external disk drive port and will control both internal and external drives. If you don't have an external drive it will control the internal drive by just plugging it into the external drive port.

The Translator will come with version 5.3 of the Magic Sac software. Dave loaded version 5.0 into my hard drive and it was then booted up. The opening screen of 5.0 has been slightly modified from it's predecessor, version 4.52 (figure 1). Aside from the title (5.0), the Magic pentagram has been replaced by a Magic Sac emblem. After saving the settings to boot from the hard drive, I returned to the TOS desktop and

clicked on "justgo" and was up on the Mac desktop in about 5 seconds.

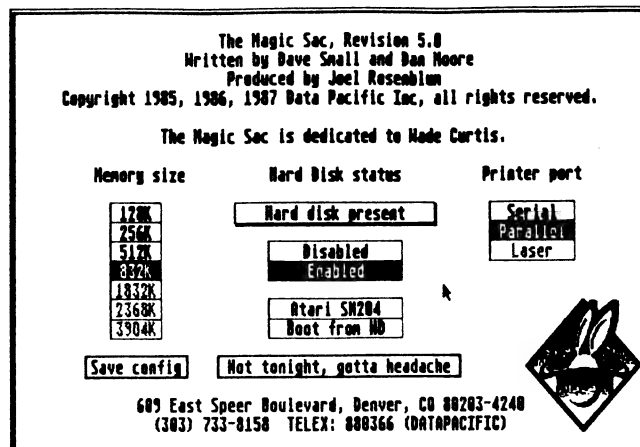


Figure 1: Version 5.0 Opening Screen

Now for the big test - will the Translator recognize a Macintosh formatted disk? I placed an original MacPaint disk into drive A and sure enough the icon for the disk appeared on the desktop. I opened the disk icon and launched MacPaint. Again it worked; MacPaint ran without a hitch. After successfully loading up several other applications, all in single sided MFS format, I decided to try a double-sided HFS formatted disks. The Translator had no trouble recognizing HFS formatted disks, nor did it have any problems running applications on these disks.

Since the Magic Sac uses Apple 64K ROMs, a portion of the newer 128K ROMs must be emulated to use the HFS file management system. Fortunately, Apple issued an INIT file called Hard Disk 20. When HD 20 is placed in the System Folder of a startup disk containing Finder 5.3/System 3.2, it patches the System file to read/write HFS disks. HFS disks are quite different from MFS disks. More about the differences in a future article.

Up to this point all the software I tried with the Translator had already been confirmed as working on Magic formatted disks. So it appears that the Translator will do exactly as advertised - read from and write to Macintosh formatted disks. It will also copy a file from a Macintosh formatted disk to a Magic formatted disk. However, don't expect miracles from the

Translator when it comes to copy protected software.

I did try to load up several copy protected programs and only one ran successfully; this was Psion Chess. I also tried Print Shop but it wouldn't load up either, due to heavy copy protection. I must admit that the other programs that wouldn't load up were games which are usually heavily copy protected. Obviously, if you're interested in games, the ST is a better game machine than the Mac. Since most non-recreational type commercial software is not copy protected, the Translator should not have any problems with software that works in Magic format. Don't expect to be able to make duplicates of heavily copy protected disks either. All the copy software for the Mac like CopyII Mac and MacZip don't work with the Magic Sac because they try to access an I/O chip contained in the Macintosh.

There is one side effect of the Translator - a decrease in the speed of disk I/O with Macintosh formatted disks. In my limited use of this device, it appears that I/O is about one-half that of Magic format. It's tolerable, but for certain software that already takes considerable time to load up, doubling the time will seem like an eternity. The reason why the I/O rate is decreased is that the Translator is basically a computer in itself which must communicate with the ST and let it know how to handle a foreign Macintosh disk. As such, the ST must decrease disk I/O when it tries to read from or write to the Mac disks. According to Dave, I/O for TOS and Magic formats are unaffected by the Translator. Additionally, the Translator must be on all the time when it's connected to the ST, even if your not using the Magic Sac.

As mentioned at the beginning of this article, the Translator that Dave brought was a prototype. As such, it still had a few kinks in it that needed to be ironed out. The most notable and annoying kink was the fact that whenever a Macintosh formatted disk was inserted into the drive the busy light would stay on constantly until the disk was ejected and a Magic format disk was inserted. This problem should be solved in the final production version.

As for formatting Macintosh disks, this will be accomplished initially with a revised version of the TOS utility MCFORMAT. Check out the features available in the new Magic Sac Super Formatter 5.0 in figure 2. You will be able to format any combination you want including HFS Magic or Macintosh formats.

There will also be a new version 2.0 of the Hard Disk formatter which will allow formatting partitions for MFS or HFS formats (figure 3). I reformatted my partitions for HFS and its been

performing flawlessly for 3 weeks now. Note that the Translator is not needed to use HFS Magic formatted disks. There are several PD and commercial programs that require HFS to run properly. So, with the addition of HFS, the Magic Sac takes another giant step towards total compatibility.

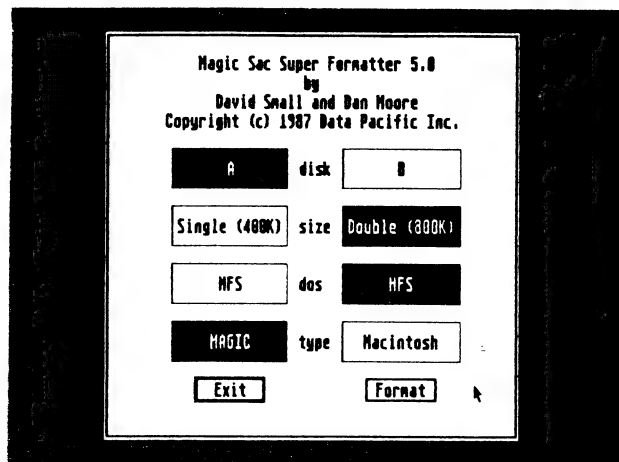


Figure 2: Magic Sac Super Formatter 5.0

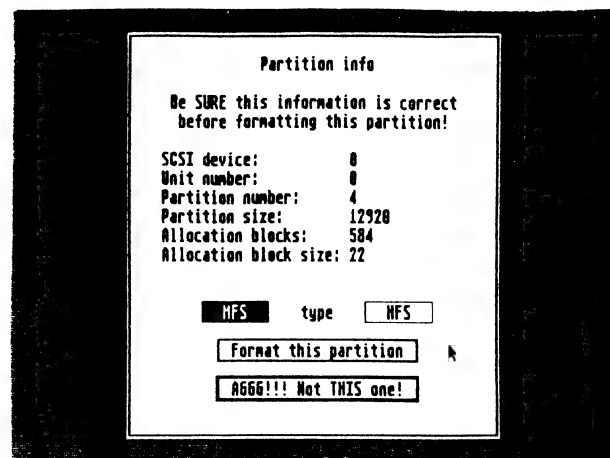


Figure 3: Hard Disk Formatter 2.0

By the time you read this article, I should have a production run model of the Translator. If I receive it in time, I will provide an update on its performance in the first 1988 issue of Current Notes.

New Library Disks

This month, three new disks were added to the Current Notes Magic library.

Disk M38, *Video Works Player #1*, contains a public domain player for Video Works animated screens. The disk also contains 11 movies with some pretty sophisticated animation. In the coming months, at least one more disk of movies will be added to the library.

(Continued on Page 33)

PIECES OF EIGHT

By Len Poggiali

OUR FAVORITE THINGS

With the gift giving and receiving season upon us once again, I thought this would be a perfect opportunity for me to make some recommendations as to which software my family and I find the most enjoyable and/or worthwhile to own. As you read through these recommendations, you should keep in mind, however, that they are based on needs, and biases specific to my family and me. As a result, your favorite programs may not be included, nor may you find some of our favorites to be admirable and/or useful.

Although I am the primary user of our 800XL at the moment, my wife and three children do manage to "sneak in" a few hours every week. Word processing is the main staple of my wife's and teenage son's computer diet. Both have settled in to using XLENT Software's *The First XLEnt Word Processor*, a product which we all like very much, and which I reviewed in the October issue.

If we owned a 130XE, I have no doubt that Atari's own *AtariWriter Plus* would get every bit as much use around our house as *First XLEnt...* does. With a 36,000 word proofreader, an integrated mail merge program, and over 47,000 bytes of available memory, this classic program is hard to beat. Unfortunately, on the 64K models, only 12,645 bytes (about six pages of text) are available. Not only does this make writing anything longer than a letter or a short report a bit of an annoyance, but since some critical options such as print preview are memory dependent, it seriously limits one's ability to employ those functions.

For creating letterheads and fliers for her business correspondence as a nursery school teacher, and for making greeting cards and banners for parties and such, my wife finds Broderbund's *Print Shop* quite useful. Hi Tech Expressions line of printer-oriented software is also much appreciated, particularly "PartyWare", which allows not only for the creation of greeting cards and banners, but also for party lists, hats, and placemats.

As a high school senior looking forward to college, my teenage son has begun to make use of our computer for preparing for his SAT college entrance examinations. The two programs we have been using are Harcourt Brace Jovanovich's *Computer Preparation for the SAT* and Hayden Software's *Score Improvement System for the SAT*. The

HBJ product contains three, two-sided disks, a user's manual, and a 469-page book entitled *How to Prepare for the SAT*, which contains test-taking tips, practice problems, practice tests, and explanations of correct answers. The three disks contain practice problems for the verbal and math sections, vocabulary "flashcards", and on-screen answer sheets with automatic scoring for each of the four practice tests in the book.

Rather than packaging their program in one large (and costly) unit, Hayden's *Score Improvement System...* consists of three separate modules: Practice Tests, Math, and Verbal. We own the Verbal module, which contains one and a half disk sides of vocabulary review, antonyms, analogies, sentence completions, and reading comprehension questions, plus a 49-page manual. Naturally the HBJ package is more comprehensive, but if your son or daughter only needs review in one area, and your budget is tight from saving for the onslaught of college tuition, then one of the Hayden products will do nicely.

The 8-bit Ataris always have been well supported in the area of children's educational and entertainment software. Although few new children's products are being marketed for the 8-bits, there are dozens of excellent older programs available in stores and through mail order. Many of these are heavily discounted because the companies which produced them no longer are manufacturing and/or distributing Atari software.

One such firm is CBS Software which is responsible for three of my six and eight-year-olds' favorite programs: *Astro-Grover*, *Math Mileage*, and *Movie Musical Madness*. The first provides children from ages three to six with practice in counting, addition, and subtraction, with Grover of *Sesame Street* acting as an on-screen guide.

Math Mileage reinforces simple addition, subtraction, multiplication, and division in a racing car scenario. Players are given numeric goals, and then must achieve those by steering their racing cars along roads containing at each juncture two forks, one of which they must choose. Each fork contains a mathematical operation (e.g., "+10" or "x4") which either will help or hinder the players in completing their numeric goals. The person who can complete his/her goal in the fewest number of forks wins the game.

Although my six-year-old needs my help with this one, she nevertheless enjoys it just as much as does her older sibling.

According to the notes on the *Movie Musical Madness* packaging, "...you set the scene, you choose the stars and you compose the musical score." The scene may be set using a goodly number of set and prop pieces, and secondary characters (e.g., a witch on a flying broom) which can be placed onto the scrolling blue background by the press of the joystick button. The star is your choice of one of three "Jazz Scats" whose names (Swivel Hips, Wahoo, and Mr. Bassman) are definitely appropriate. The musical score can be formed by choosing from a number of different pieces. When you've selected all three ingredients, the movie is ready to be "shot". This consists of moving your character around the setting, and having him or her interact with the settings, props, and other characters while the music you have chosen plays in the background. When the scene is completed, you may see the rushes, edit your work, or add many additional scenes. Although *Movie Musical Madness* lacks the sophistication of a serious animation program such as Electronic Arts' *Movie Maker*, its colorful graphics, smooth animation, pleasant music, and ease of use make it perfect for children of all ages.

Two other of my children's favorites are Spinnaker's *Alphabet Zoo* and *Tink's Adventure*, which is one of the *Tink! Tonk!* series of programs from Mindscape. The former teaches letter recognition and spelling to children from ages three to eight as they race through mazes picking up letters. The latter helps children learn ABC order and gain familiarity with the computer keyboard by reading an interactive story and by playing a number of educational games with levels appropriate for ages four to eight.

Although I own databases, a spreadsheet, checkbook balancers, loan amortization programs, calendar generators and such, the disks on which they reside rarely are moved from their homes in our storage containers. They are fun to "play with" from time to time, but practically speaking, considering my wife's and my work and our lifestyle, my family has very little need for them.

The impractical side of me finds enjoyment, and often a good deal of mental and emotional stimulation in the playing of games. When my writing is over for the evening, the type of games I usually boot up in order to reward myself for a night's work, fall into three general categories: strategy/conquest, sports arcade, and text adventures.

My favorite in the first category is Microprose's *Crusade in Europe*, which is a simulation of the Battle for France and the Low Countries from D-Day until the Battle of the Bulge. One may play a long version of the game which includes most of the scenarios under the title "The Battle for France", or a number of shorter versions which treat each scenario separately. The latter versions not only allow for the historical battle, but also present "what if?" variants for those who are curious to know what might have happened if, for example, the Germans had not been fooled into keeping the bulk of their army in areas other than where the D-Day Invasion was taking place. The play system is relatively easy to follow and may be controlled by joystick or keyboard. Although the graphics are not great, units are easily recognizable as they move over a colorful scrolling map. On the other hand, the documentation is superb — intelligently written, historically detailed and accurate, and chock full of interesting facts about the various campaigns. Nearly everything about *Crusade in Europe* speaks to the fact that it was a labor of love for its writers, programmers, and for Microprose in general. Their *Decision in the Desert* and *Conflict in Vietnam* employ the same play system and graphic design.

A second favorite in this general category is Electronic Arts' *Lords of Conquest*, the closest thing to *Risk* (my favorite board game) on the computer market. The object of *Lords...* is to conquer territories, to develop resources on them, and ultimately to build up to six cities on one's territory before one's computer opponent or human opponent(s) do. The back side of the program disk contains twenty maps created by the authors. There are also capabilities for having the computer generate random maps, and for one to create one's own from scratch.

Two very fine arcade sports games are Accolade's *HardBall* and Access Software's *Leaderboard*. Both present reasonable facsimiles of the sports they are representing (baseball and golf, respectively), while boasting excellent graphics and easy-to-learn play systems. *HardBall* against a computer opponent is more difficult, largely because this program (and the game of baseball itself) require quicker reflexes on the part of the human playing them than does the game of golf. *Leaderboard*, however, is no slouch if played in the Professional mode. With the need for near perfect timing on the joystick in order to control the distance of the ball and the snap of the club, and the proper judgement of winds for tee and fairway shots, one can find oneself spending a great deal of time in water hazards, of which there are many.

(Continued on Page 33)

ST BOOKSHELF

By Pamela Rice Hahn

BOOKS FOR YOUR CHRISTMAS LIST

Those of you wishing to take advantage of the LOGO programming language that was initially packed FREE with your ST should seriously consider taking a look at:

ATARI ST LOGO USER'S GUIDE

(\$19.95, ISBN/0-916439-50-X, 374 pages from: ABACUS SOFTWARE, P.O. BOX 7219, Grand Rapids, MI 49510, 616/241-5510)

This book is intended to provide a step-by-step guide to learning how to program your ST using LOGO. In Chapter 1, it begins by giving an elementary explanation of loading LOGO, how the windows work, and controlling the windows. In the initial chapters, the authors assume the reader has no prior programming experience and provide explanations of programming fundamentals in combination with the LOGO instructions. Lessons progress to three-dimensional graphics and conclude with the more complex beginnings of writing your own full-fledged data management system, giving example programs such as the final section's 'File retrieval and file management.'

ATARI ST LOGO by Martin Sims.

Reading this volume is much simpler than figuring out how you go about telling your local bookseller which company the book is actually available from. The copyright page credits Glentop Publishers Ltd. and the back cover lists Hayden Book Company. Since the latter was recently acquisitioned by Howard W. Sams & Company, all Hayden books are officially available through Sams. (Whew!) At any rate, this 272-page volume, ISBN/0-8104-6529-9, is available at \$16.95 from Howard W. Sams & Co., 4300 West 62nd Street, Indianapolis, IN 46268.

The extensive illustrations in this book make it an ideal tutorial for those times when much of your reading is done when you're NOT actually seated in front of your computer. Sims provides an assortment of interesting "Projects" to key in and aid in your understanding. Programming examples and problems progress from simple turtle graphic drawings to an interactive strategy game.

ST Disk Drives: Inside and Out
\$24.95, 403 pages, from ABACUS.

This book is on my "TO DO" list, meaning I eventually DO intend TO read it. I glanced

through it, moved it from one stack to another to the bookcase and then back onto another stack, and referred to the index to find answers to a question or two I've had regarding this subject lately. Eventually this book will help me better understand the concepts and techniques behind the ST's floppy, hard, and RAM disks. These bits and pieces of random readings haven't really been extensive enough to comment on the book. Then why am I endorsing something I haven't even read yet? Because.

Need more reason than that? Okay. I have yet to be disappointed in an ABACUS title.

COMPUTER DICTIONARY, Fourth Edition by Charles J. Sippl.

\$24.95, ISBN/0-672-22205-1, 562 pages from Howard W. Sams & Company.

Over 1000 of this book's 12,000 micro, mini, and mainframe terms, definitions, and computer technology explanations are new to this edition.

DAVE BARRY'S BAD HABITS: A 100% Fact Free Book
ISBN/0-8050-0254-5, \$5.95. An Owl Book, Henry Holt and Company.

Those of you not familiar with Mr. Barry's syndicated newspaper column may not be aware of such truths as:

"I agree with people who want to ban video games. These games definitely destroy your moral fiber.... Golf is similar to video games in that it is a monumentally useless activity that people become obsessed with and waste a lot of money on, but it has the added drawback of encouraging people to wear really stupid clothing, such as pants that can be seen with the naked eye from other galaxies. I strongly suspect that if our nation's youth continue to play video games, many of them will eventually graduate to golf,..."

"For the benefit of those of you who do not know what sector you belong to, here is a simple way to figure it out: If you get Presidents' Day, election day, Arbor Day, Columbus Day, your birthday, Groundhog Day, and Flag Day off, you belong to the government sector. Otherwise, you belong to the private sector,..."

"Life is anything that dies when you stomp on it."

"....Cro-Magnon Man, who was the son of Stephanie Cro and Eric Magnon, a primitive but liberated couple."

The unfortunate thing about trying to comment on a book of this nature is that, somewhat like trying to single out a FAR SIDE joke and explain its humor to someone who's never been exposed to that cartoonist before, reading Dave Barry has the same progressive effect. Something doesn't necessarily have to be funny to make you laugh.

Dave Barry's hilarious distortions soon begin to make sense. Once you reach that point -- for some on page 1, for others while reading the introduction, I feel compelled to warn you that reading this book in public may cause embarrassing displays of emotion. I believe you should read this book; however, for the sake of decorum, do so in the privacy of your bathroom.

* * * * *

MAGIC SADDOM (Continued from page 29)

Disk M39, Demo Disk #2, contains demonstration versions of *Anatomiser*, *DeskPaint*, and *SuperPaint*. *Anatomiser* is an educational type program that originally was developed to teach human anatomy. It's currently being used for all types of educational purposes. Also included are six anatomy lessons and one US Geography lesson which have superb graphics. Although most of the features of *Anatomiser* have been disabled in this demo version, the lessons and examination portions of the program are active. *DeskPaint* is a *MacPaint* clone except it's a desk accessory. In this demo version everything works except the Clipboard and Save features. The Print option is active in this demo, so anything created with the program or loaded into it can be sent to a dot matrix printer. *SuperPaint* is one of the neatest graphic programs around with both *MacPaint* and *MacDraw* features. This demo version does everything the full version does except Save files, everything else works including the Clipboard and Print features.

Disk M40, contains version 1.03 of *Hack* for the Macintosh. This was a pretty popular adventure game for the ST about a year ago and has become very popular on the Mac also. The game is very similar to *Rogue*. Included on the disk a manual with full documentation for those of you who are unfamiliar with the game.

That's it for now, ENJOY THE HOLIDAYS!!!

PIECES OF EIGHT (Continued from page 31)

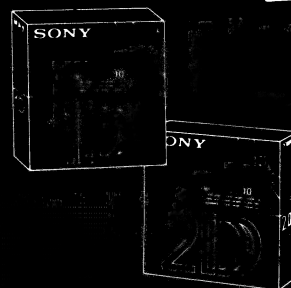
As far as the Atari 8-bits are concerned, Infocom has pretty much cornered the market on text adventures. Gone are the days of the two-word, Scott Adams-type games (good as they were for their time) and the lackluster writing style of former text adventures; for those improvements, we mostly have Infocom to thank. My recent favorite among their many excellent titles is *Wishbringer*, the story of a postman who is ordered by his boss to deliver a letter to the hag who owns the local Magick Shoppe. Actually the letter is a ransom note for the old lady's cat. The mailman's job is to return the cat to its owner, a task fraught with danger as the catnapper is the embodiment of evil (naturally). Also, when the postman (you, the player) returns to town, he finds that in his absence it has changed into a corrupt, militaristic place which, of course, complicates matters even more. As with other Infocom games, the puzzles are many, the prose is rich, and the characters populating the story are vividly depicted. Although *Wishbringer* is labelled an introductory game, I found it challenging enough for my tastes.

Those then are some of our favorite things. Have a Happy Holiday Season!

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ATARI'S SMALL MIRACLES

By Mark A. Brown

XE DISK UTILITIES

Welcome back to Atari's Small Miracles, the only regular source of type-in programs for the 8-bit Atari computer. This month I wrote the programs from scratch, forcing myself to comb the manuals of DOS, the technical (ab)users notes, and all for what? To recover my disks! I had a major disk crash that wiped out my BASIC programming disks (i.e. those with the files for this column!). For once the programs along the theme this month, Disk Utilities, were absolutely essential to my programming. I hope you find them as useful. Keep in mind, however, that these programs are only made for single density disks (i.e. 720 sectors of 128 bytes each), such as those the 810 disk drive and 1050 disk drive work with, and a DOS 2.0 compatible file structure. That's what I have. If you have any double-density disk utilities send'em to me. I'd love to publish them and the readers I'm sure would appreciate them!

DISKEDIT

This first program could have been written with a smoother programming style, with a little more speed, and so on; but since it was the first one I wrote it came out kind of rough, but for just that reason it teaches the most. This program lets you edit (i.e. modify) the individual sectors of a disk. This is a lot of power and can easily have grave consequences. Type it in, RUN it, enter the sector number you want to edit (more on that below), then edit it by moving the cursor around with the arrow keys and alter individual bytes just by typing what you want to be there. Just like the normal Atari editor, if you want the arrow characters press ESCape first, THEN the arrow you want. To write the sector to disk press any of the function keys (Start, Option, or Select) and press a key. You'll hear it being written and you'll be returned to editing.

A note on choosing sector numbers: the most useful sectors for this program are 361 through 368, the disk directory. You can rename files by changing the file names or even UNdelete files. The first byte in the 16-byte file name block (usually a "B", either upper or lower case, possibly in inverse), if you change its inverse orientation (i.e., change an inverse B to a normal or vice versa) you'll alternately delete or undelete it. There is FAR more to this than that however, so if you undelete a file the first thing you should do is load the file and save it again, and don't be surprized if errors occur on the load — it WILL if you have written anything on the disk since the delete.

Remember, be careful. You may want to use a junk disk or a backed-up one to fool around with.

Note that the machine language routine will read any sector into location 1600. You may be able to write a much better routine knowing this. There is an added benefit written in. The variable returned (i.e., the "X" in "X=USR(1536,secno)") is the next sector in a DOS file! It returns the LINK in the file. This may be completely useless information to you, but was absolutely essential in the next program, which uses the exact same subroutine. If you want, the routine can easily go into a string, there is no need for it to be in page 6 of memory. I know, I'm infamous for putting ALL my programs into page 6. Well, this one can go in a string.

```
10 FOR A=1536 TO 1589:READ B:POKE A,B:
NEXT A:? "Kedit sector#":INPUT S:POKE
752,1:N=USR(1536,S):FOR Y=0 TO 3
20 FOR X=0 TO 31:POSITION X+4,Y+4:? CH
RS(27);CHR$(PEEK(1600+X+32*Y));NEXT X
:NEXT Y:OPEN #1,4,0,"K":X=0:Y=0
30 POSITION X+4,Y+4:C=PEEK(1600+X+Y*32
):O=C:C=C-128*(C<127)+128*(C<128 AND C
<27):? "E";CHR$(C);"+";
40 GET #1,K:? CHR$(27);CHR$(O-128*(O=1
55)):OX=X:OY=Y:X=X-(K=30)+(K=31):Y=Y-(
K=28)+(K=29):X=X-32*(X=32)+32*(X=-1)
50 Y=Y+4*(Y=-1)-4*(Y=4):IF K<27 AND (
OX<>X OR OY<>Y) AND PEEK(53279)=7 THEN
GOTO 30
60 IF PEEK(53279)<>7 THEN POKE 1537,87
:A=USR(1536,S):POKE 1537,82:GOTO 30
70 IF K=27 THEN GET #1,K
80 POKE 1600+Y*32+X,K:GOTO 30
90 DATA 169,82,141,2,3,169,49,141,0,3,
169,1,141,1,3,169,64,141,4,3,169,6,141
,5,3,104,201,1,208,254,104
100 DATA 141,11,3,104,141,10,3,32,83,2
28,173,190,6,133,212,173,189,6,41,3,13
3,213,96
```

FILERCVR

My specific problem with my disks was that for some unexplained reason my directory sectors were completely written over. They were all blank sectors. Therefore, although I didn't have a directory, I did have the files. I just had no way to get to them. Using this program (and the other three in the column), I recovered them. Given the number of the first sector of the file on the disk, this program will TRACE the program using the sector links and build the program in a

string to be written to another disk. How do you find the first sector of a file? Keep reading...

```
10 FOR A=1536 TO 1589:READ B:POKE A,B:
NEXT A:DIM F$(FRE(0)-300),M$(20):? "KF
file recovery: start sector#";:INPUT 5
20 S=USR(1536,5):F.A=1 TO PEEK(1727):B
=PEEK(1600+A-1):? "E";CHR$(B):F$(LEN(
F$)+1)=CHR$(B):N.A:IF S<>0 THEN 20
30 ? "Replace disks: file name?";:INPU
T M$:OPEN #1,8,0,M$:? #1;F$;:?"File c
omplete":CLOSE #1:RUN
90 DATA 169,82,141,2,3,169,49,141,0,3,
169,1,141,1,3,169,64,141,4,3,169,6,141
,5,3,104,201,1,208,254,104
100 DATA 141,11,3,104,141,10,3,32,83,2
28,173,190,6,133,212,173,189,6,41,3,13
3,213,96
```

DISKVIEW

This program is a GOOD place to use the data entry program I gave you a few columns back. You have a few ugly lines of data to type in. All this program does is look at the individual sectors. That's it. Now, this did not HAVE to be done in machine language, but it is SO much nicer that it was! Type it in, enter a sector number, then use the OPTION and START keys to wander around the disk and see what it contains. When you have the sector you want, press SELECT. It is in machine language to make it go much faster. If you have typed in DISKEDIT, imagine trying to go through 720 sectors at the speed that DISKEDIT prints out.

```
1 C=0:DIM A$(133):FOR A=1 TO 133:READ
B:C=C+A*B:A$(A)=CHR$(B):NEXT A:IF C<
>925531 THEN ? "Data error":STOP
2 ? "K Disk sector viewer: start at #":
;:INPUT 5:?" "
;"":POKE 752,1:FOR A=1 TO 4
3 ? " | .....
.|":NEXT A:?" "
;"":S=USR(ADR(A$),5)
4 DATA 169,82,141,2,3,169,49,141,0,3,1
69,1,141,1,3,169,64,141,4,3,169,6,141,
5,3,104,104,141,11,3,104,141,10,3,32
5 DATA 83,228,162,0,160,84,189,64,6,8,
41,127,201,32,176,4,105,64,208,6,201,9
6,176,2,233,31,40,16,2,9,128,145,88
6 DATA 200,232,138,41,31,208,5,152,24,
105,8,168,138,16,214,173,31,208,201,7,
240,249,201,3,208,14,173,10,3,208,3
7 DATA 206,11,3,206,10,3,24,144,182,20
1,6,208,10,238,10,3,208,173,238,11,3,2
08,168,173,10,3,133,212,173,11,3,133
8 DATA 213,96
```

Notice that this program is numbered below ten: you can (and I recommend you do) combine this with both DISKEDIT and FILERCVR. Simply

eliminate the ":INPUT" in line 10 of both programs. That's it. The variables were written to correspond and there are no further conflicts.

DISKINV

Finally, a program that lets you know what you have on your disk. This program does a file inventory of your disk, showing exactly where the files are. Similar symbols are the same file. You'll be surprised at how much some programs jump around the disk, with some data near the beginning of the disk, jumping over some to the middle, and possibly more. Aside from the curiosity factor, this program answers very neatly the one question FILERCVR requires: where is the first sector of a file? A cursor movement routine is provided, so move it to the earliest occurring sector with the character of the file you wish to recover. The sector number and file number are printed at the bottom. This and FILERCVR were used extensively in my own disk recovery.

Once again, it is mostly in machine language for speed, since it has to look at all 720 sectors of the disk.

```
10 DIM D$(720),A$(111):FOR A=1 TO 111:
READ B:A$(A)=CHR$(B):NEXT A:D$="X":D
$(720)="X":D$(2)=D$:POKE 82,0
20 ? "K 1 2 3
412345678901234567890123456789
01234567890";:Q=PEEK(88)+256*PEEK(89)
30 ? "
|":X=0:Y=0:OPEN #1,4,0,"K":POKE
752,1:JUNK=USR(ADR(A$),ADR(D$))
40 POSITION 10,22:?"Sector #";Y*40+X+
1;" File #";A$(D$(Y*40+X+1));" "":N
Q=Q+X+Y*40+120:C=PEEK(NQ):OC=C
50 C=C+128*(C<128)-128*(C>127):POKE NQ
,C:GET #1,K:POKE NQ,OC:X=X-(K=30)+(K=3
1):X=X-40*(K=40)+40*(K=-1)
60 Y=Y-(K=28)+(K=29):Y=Y+18*(Y=-1)-18*
(Y=18):GOTO 40
70 DATA 169,82,141,2,3,169,49,141,0,3,
169,1,141,1,3,141,10,3,169,64,141,4,3,
169,6,141,5,3,169,0,141,11,3,165,88
80 DATA 24,105,120,133,0,165,89,105,0,
133,1,104,104,133,255,104,133,254,32,8
3,228,48,10,173,189,6,74,74,24,105,1
90 DATA 208,2,169,129,160,0,145,0,145,
254,230,0,208,2,230,1,230,254,208,2,23
0,255,238,10,3,208,3,238,11,3,173,10
100 DATA 3,201,209,208,206,173,11,3,20
1,2,208,199,96
```

I hope you'll find the programs this month as useful as I did. If you have any programs you are especially proud of and would like to see them published here, send them to: Atari's Small Miracles, c/o Mark A. Brown, 7097 Game Lord Dr, Springfield, VA 22153. And I'll see you next month!

ATARI SCUTTLEBITS

By Bob Kelly

ATARI! What next for home enthusiasts...

COMDEX has come and gone. In the past, this time of the year was one of excitement for Atari HOME computer owners. New products were announced. The home user was the center of attention. Sales were up and the image of a game machine company was fading fast. Yet, even with the smiles on corporate Atari's face at this year's COMDEX, an air of somber reality pervades the user community. Times are a-changing.

Despite a flood of new products, Atari stock is down to the neighborhood of \$6.50 a share, reflecting a general feeling of uncertainty. Third quarter earnings have been reported and they are lower per share than the same period of 1986. While two-thirds of Atari's sales remain overseas, there is no reason to expect a dramatic expansion in these markets. Foreign sales have been impacted much in the same fashion as in the U.S., consumer expenditures are projected to decline since the stock market crash of October 20. Consensus projected GNP growth for the U.S. in 1988 has nosedived to 1.9%. Last, but certainly not the least, the purchase of the Federated group of stores by Atari could hamper rapid achievement of other short-term corporate objectives by straining cash reserves.

As for Atari's strategy, it appears the game machine is back with a vengeance. Atari is now a retailer and manufacturer of workstations for the scientific, high-end educational, and business markets. However, the 68030 (32 bit) machine is still not ready and the 8-bit user is clearly being lost in the shuffle. To the home user, this all translates into a sense that Atari Corporation has lost its sense of direction. (I have heard this phrase from users more in the last month than any other comment in my four years writing this column). In fact, all that happened is that the home computer user (520/1040 ST) has been relegated to a lesser status. Does it really make sense for the user community to react so negatively? Let's examine a few of the recent developments in more detail before drawing a final conclusion.

I. COMDEX

InfoWorld covered Atari's display at Comdex in its Nov. 9 issue stating that Atari took aim:

Directly at business and technical markets announcing a slew of new products at COMDEX, including PC clones, a CD ROM player, multi-user software for the ST and Mega lines, and

a radical computing engine based on the Immos T-800 RISC processor.

The new high-end workstation is called Abaq. It requires at minimum 4 megabytes of DRAM with each workstation expandable to 64 megabytes. The software [Helios] supporting Abaq can read both MS-Dos floppies and Unix hard disks. This machine, owing to its very high-resolution graphics, is reputed to be capable of providing a picture similar to your camera.

The IBM PC clones introduced are replacing those announced last year, but NEVER introduced into the U.S. market (this established Atari as an industry leader in at least one segment of the domestic market - vaporware). Atari's variations on the PC clone are:

Table 1

Model	Clone Type	Expandability	Cost
PC1	PC	0 slots	<\$1000
PC2	XT	4 "	<\$1000
PC4	AT	5 "	<\$2000
PC5	16-MHZ-80386	? "	<\$2000

The PC2 and PC4 are Atari machines intended to compete in what is in fact a shrinking market. To illustrate, according to IBM, they have shipped over 1 million of the new PS/2 machines in the last seven months. The new operating system (OS/2) to accompany the PS/2 machines goes on sale this month. OS/2 superseded the software standard set earlier by IBM. There is little doubt by most analysts that OS/2 is the standard of the future. Thus, much of the new high-powered IBM software will not work with the first generation clones such as those being introduced by Atari.

The CD ROM is a product Atari indicated it would like to market more than a year ago. It is capable of being connected to both an Atari computer as well as a stereo system, a pleasant surprise for the audiophile. What software will be available for introduction with this machine remains a mystery.

II. Third Quarter Earnings

Atari's third quarter 1987 net income rose by 9% to \$9.9 million or 17 cents a share versus \$9.1 million or 21 cents a share in 1986. (The

number of shares outstanding rose to 58 million from 47.5 million over the past year.)

Revenue rose by 34% to \$80.4 million from \$59.9 million for the same period a year earlier. Overseas demand was accountable for about two thirds of Atari's total revenue with the 1040ST being the sales leader.

III. Analysis

This is a lot to digest. What in the world does it all mean? First, let's look at the cost data and expected delivery dates for the new products introduced at COMDEX.

Table 2

Item	Cost US\$	Projected Availability	
		by Atari	by Joe Skeptic
Abaq(1)	\$5,000	Apr/Jun '88	Late '88/'89
PC clones	(*)	Jan/Mar '88	Jun/Dec '88
IDRIS(2)	800	?	?
Moses LAN(3)	?	?	1989
CD ROM	599	Feb '88	Mid 1988
(*) see Table 1 (1) 4 megabyte single processor system only (2) multiuser operating system (3) local Area Network (LAN) which will connect up to 17 PCs, Megas, Mac, STs			

Atari expects most of the products to be on the market within six months. Given Atari's reputation for making scheduled dates, there is a natural reluctance to bet when the products will be on the dealers' shelves. An old friend, Joe Skeptic, made his own estimates as to when these products might appear, shown in the 3rd column of Table 2. Frankly, I believe even Joe's estimates in some cases may be optimistic. Why is timing important? IBM plans to introduce a whole slate of high-end Unix machines to the U.S. market in 1988. Delays make Atari's already uphill battle for market share more difficult.

Another immediate issue is how Atari plans to sell these high-end products in the U.S? Again, they are aimed at the business, educational, and scientific markets. They are not intended to be sold through mail order or Mom and Pop stores. They will require not only a dealer network but a complete service network both of which will take Atari years to accomplish.

We now know why Federated was purchased in the U.S. But, what happens beyond the 4 to 5 states where Federated stores are located? Atari either needs to buy more regional outlets or make a deal with a major computer retailer, such as Entre Computers. The former option appears

unlikely for the next year or so given Atari's cash position after the purchase of Federated and the decline in the value of its stock. So, who in the latter category is going to deal with Atari in the U.S.? My bet is that Atari will first concentrate on marketing their new machines and establishing a dealer network in Europe, not the U.S. Once a successful operation has been demonstrated overseas, more computer retailers should be interested domestically.

If a growing percentage of Atari's corporate talent focuses on the business and scientific market, the 520/1040 ST user might well have some justification to wonder what Atari has in store for them. Does Atari expect the vast majority of present or future home users to move up to the Mega machine given the present price structure? Unlikely.

Like it or not, ignoring the home user and concentrating its limited resources upon LONG-TERM objectives has to be a wise market strategy for Atari at this juncture. The fundamental concern with this strategy is Atari may have taken on too much too soon financially and some of the product offerings may have a tough time penetrating the U.S. market (PC2, non-postscript laser printer, etc.). Failure to deliver products this time WILL carry serious market consequences. There are no easy answers as to the future despite what others might say. Unless one is sitting in the board room, any evaluation is nothing more than a guess (even here it still might be). For the home user, sit back, buckle up, 1988 could be one hell of a ride. The game is definitely for high stakes — Atari's future market power.

Atarifest-1987

- o Atarifest 1987 has to be rated a huge success. The crowd attending easily exceeded the 4,000 projected (probably closer to 5,000). Reported sales by vendors were very good to excellent and some products such as the Magic Sac were completely sold out.
- o Atari was present showing off their equipment. It was a good marketing opportunity and they took advantage of it as they should.
- o Local advertising for the event was poor. This makes the huge turn-out all the more remarkable. What apparently happened was while areas along the east coast heard about the show, those in the Metropolitan D.C., Maryland, and Virginia areas were largely in the dark. A better job has to be done.

Sorry no product endorsements wait till February for the best of '87. Merry Christmas and a Happy New Year.

RELAX AND ENJOY

By Joe Kuffner, (c) 1987

THE SENTRY and STONE - AGE DELUXE

Do you remember that feeling you get on a cool, fall morning? The crisp air is accented by the refreshing smell of the neighbor's fireplace. Well, it's back again this year. Take advantage of this climate to stay indoors, build a fire (in the fireplace), drop a DOORS tape into the deck, and boot up the computer. You could pop your favorite game into your drive, and relax into computer "paradise"! Heck, maybe you could even start playing a new game.

I've got a couple of pieces of software that I know will provide you months of enjoyment, if you become addicted. Each of them have staying power by being attractive games with seemingly limitless potential for entertainment. I'm referring to *THE SENTRY*, a new release from Firebird Software, which advertises 10,000 different playing screens, and my PD-of-the-Month selection, *STONE-AGE DELUXE*, which offers the user the ability to design his/her own playing fields. Both are capable of providing relaxing entertainment at least through to spring.

The Sentry

Firebird is an affiliated line with Rainbird Software (of *PAN* fame). This time, they have deviated from their traditional line of illustrated graphics adventures into the field of interactive strategy games. In fact, it's difficult to pinpoint exactly what category of game into which *THE SENTRY* fits. It is a strategy game requiring thinking, but in a time-limited, aggressive (hostile) situation similar to arcade games.

You play as a synthoid, a computer created inanimate robot, with certain "transporter" qualities. Your mission is to out-smart your adversaries who have more "qualities", but obviously not your superior intellect. Your goal on each of the 10,000 worlds is to absorb all of the energy on its surface. Of course, your enemy's goal is to absorb all of your energy.

In keeping with the laws of physics, energy can neither be destroyed nor created - only changed. The way to go about this in *THE SENTRY* is to convert the energy of trees, boulders, synthoids, sentries (specially-equipped bad guys), landgazers (allies to the sentry), and meanies (more bad guys) into other boulders and synthoids in order to move around. You see, the various elevations of each of the landscapes of

the worlds, must be navigated. But, because you are an inanimate synthoid, your only means of movement is to create another synthoid, from available energy, and transport yourself to it. In order to attain different altitudes, you must stand on boulders, or physically be able to place a synthoid on higher ground before transporting over to it. This particular maneuver takes a great deal of planning and time. Unfortunately, time is not on your side. If the bad guys spot you, they will begin to absorb your energy.

Your synthoid has the ability to scan the landscape by looking around (32 increments), plus the ability to "float out of yourself" to look down at the landscape from the sky, and also to pan your sights up and down. By doing this, you hope to spot items of energy to absorb. However, it isn't good enough just to see your enemy, you must be able to fix your sights on the base of the unit (i.e. above it)! The documentation is very clear on the best ways of getting to this vantage, so I won't go into it here. Suffice it to say that you will die often learning to do this. However, after having learned a couple of the techniques, you'll start enjoying the game much more. After absorbing all of the energy on a world, you'll be able to hyperspace to another world (you will be provided an eight digit code for each).

The mechanics of "getting around the worlds" is accomplished by use of a combination of keyboard and mouse and also by keyboard alone. Personally, I prefer the former, although after playing for some time, I still make key errors (creating trees instead of synthoids, etc.) which can waste valuable time. The instructions on how to use the features of the game are laid out superbly in the manual, with the use of pictures, concise strategy tips and best of all a "key guide". The packaging is very slick and professional, as is the programming. More on that in a moment. The program runs on color monitors, only.

I'd like to offer a couple strategy tips of my own, in addition to those that were presented in the manual. Study the landscape before entering, and take advantage of the "help" map (the view from the sky). This will result in a few less unnecessary turns. The second tip is to use the "U" key as often as possible. It speeds up the game considerably, although you don't get the benefit of seeing the entire 180 degree pan.

The last tip is to limit the number of boulders you stand on to 1 or 2. When the landgazer spots you you just don't have enough time to salvage all of them. Better to lose only a couple.

Although the program is extremely well thought out in that it has many details which are superb and entertaining, it does have its poor aspects. The graphics are blocky, reminding me of *BALLBLAZER* on the old 8-bit machines. Further, the panning (scrolling) of the screen is just too slow (read b-o-r-i-n-g). And without reason. The game takes far too long to play, as a result, with each level requiring a good 5 minutes to complete. The slowness is enough to dampen my enthusiasm for what is otherwise an exceptional, original program. Maybe I'm too hard on the program because I don't have as much time for the computer as I would like.

If slow, but challenging games don't bore you, then you'll love this game because it has most of the elements of a winner. Be patient with your judgement, though. If the slowness of the scrolling doesn't bother you, you may find yourself addicted, and become a synthoid yourself with only 9,999 more worlds to visit.

Stone-Age Deluxe

For the third time since I've been writing this column, my PD-of-the-Month selection comes from the hands of David Addison. In his latest compiled GFA Basic effort, *STONE-AGE DELUXE*, he has again mastered all that is great and enjoyable, in fun, arcade software. (Mr. Addison's previous efforts included *MONOPOLY* and *MILESTONE*). The program includes some modifications by John Hickey and it was originally designed by Klaus Kramer.

This game is similar to the First Star Software game, *BOULDERDASH*, for the 8-bit Atari's. Your mission is to travel through the various playing fields gathering heads of cabbage while avoiding falling boulders. One or two players may enjoy the fun. Five levels of difficulty and three more time options give you a lot of flexibility to tailor the game to your ability. The joystick is used to manipulate your player. Although the game would appear to look like a simple arcade game, it definitely has the added puzzling dimension of strategy. This strategy must be implemented in a finite amount of time in order to progress to higher levels.

Another nice twist is the ability to design your own playing fields and to save them to disk for future use. The program comes with two playing fields and with complete documentation as well as help screens. The program is GEM integrated for mouse control of the disk I/O and

option selections.

STONE-AGE DELUXE is a lot of fun and will make a fine addition to everyone's software library. Its available on CN Lib #164, BBSs everywhere, and in the PD library of many clubs. Also, look for other screens for *STONE-AGE DELUXE* that other players have created. One that I've come across is *ROBYN'S REVENGE*. It is quite challenging. I most certainly had fun with this program.

Have a wonderful holiday season and have a safe New Year. Keep up your support of the PD authors (morally and financially!). It's the season to Relax and Enjoy.

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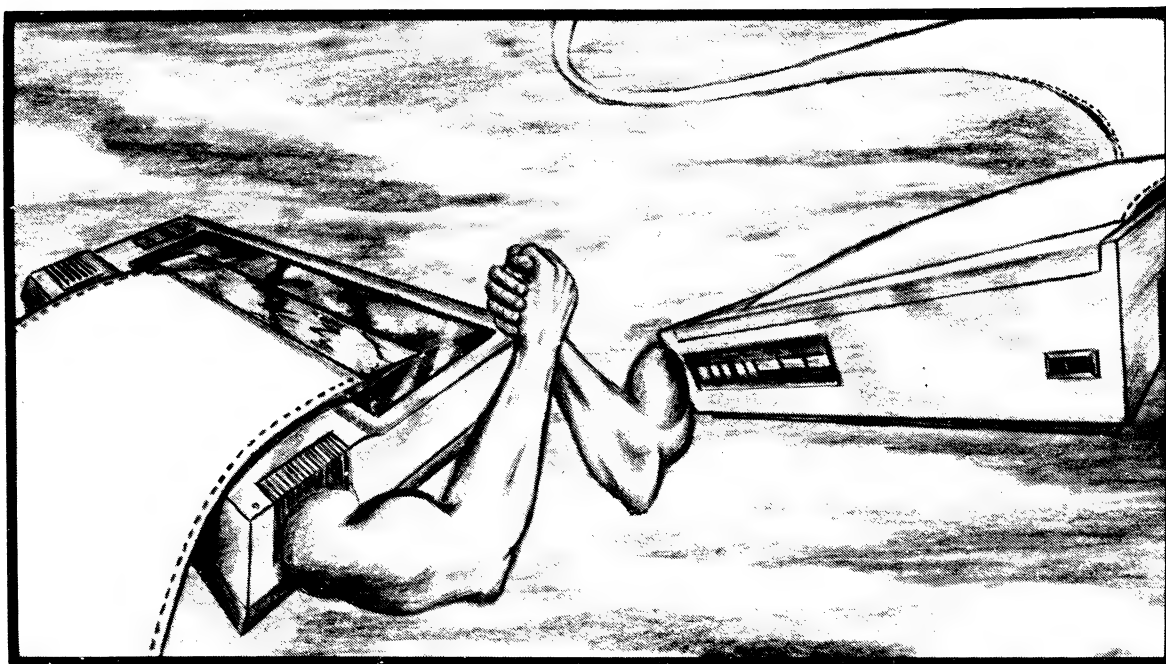
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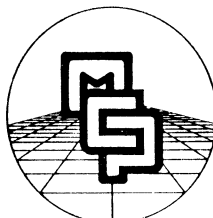
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WORDPERFECT

Version 4.1 for the Atari ST

Review by Milt Creighton

Let's get something straight right at the beginning; I'm not an expert on *WordPerfect*. Some people I know earn their living teaching other people this one program. This review is not being written for them. It's written for the rest of us who have heard at least some of the hoopla about this sophisticated word processor and want to know more before shelling out several hundred dollars to buy it.

The first thing that struck me about *WordPerfect* was the price. It retails for \$395, but almost no one expects the price to remain there. At the Washington Atarifest it was going for \$195-\$200, though the stores in this area (Charlottesville, VA) generally sell it for more. The price may well level off around \$220-\$225. There is also a special student/educator's price of \$99 — though you'll have to prove you are legitimately entitled to the student/educator status by filling out some forms. It's worth it though, because you'll get the full-up version of the program instead of a scaled-down model.

The second thing I wanted to investigate was just what version of *WordPerfect* was being rewritten (that's right — rewritten,, not ported over) for the ST and the Megas. We get version 4.1. The current IBM version is 4.2 and version 5.0 (again for the IBM) was just announced at COMDEX '87. What do they get that we don't?

Version 4.2 (for the IBM) looks to be a modest upgrade over version 4.1. It adds automatic line numbering, the ability to generate a table of authorities (precedents cited in a legal brief), non-printing document comments, a document summary (to help distinguish a specific document among many), left, right, and center decimal tabs, a concordance feature (helpful in generating an index), and, most importantly, a document preview feature prior to printing. There is also a nice little utility program included which permits converting other word processor files (WORDSTAR, for example) to *WordPerfect* format.

Version 5.0, also for the IBM, is a major advancement which permits the integration of imported graphics and text into a single document. The graphics can be cropped, sized, rotated, and placed anywhere on the page. The document preview option permits on-screen viewing (including a zoom feature) of the text and graphics page. It carries a price tag of \$495 and should be available in the spring.

Version 4.1 for the Atari ST and Megas, on the other hand, offers some features not available on the IBM. For one thing, the Atari version is GEM-based so we do get some of the features (sort of) of the IBM version 4.2, e.g. on-screen type-styles, and the familiar drop-down menus. We don't get the conversion program, though *WordPerfect* will accept ASCII files after a fashion. And don't look for version 5.0 for the Atari soon. The latest word is that *WordPerfect* Corporation intends to release 5.0 for the ST but it will be at least a year in coming.

Depth and Power

Lest you think \$200-\$250 is an inflated price for a word processor, let me hasten to reassure you. The 600-page manual included with the program reveals *WordPerfect* to be the most powerful word processor for the Atari ST and Mega computers to date. Yes, it is a first-generation word processor (by my own definition, since it doesn't permit the integration of text and graphics and doesn't have a variety of on-screen fonts). Yes, there are other word processors with most of the up-front features of *WordPerfect*. There are even some with features that *WordPerfect* doesn't have (*SIWriter* has a print preview feature, for example). But there is no other word processor with the sheer depth and power of *WordPerfect*. I remember a review written by Frank Sommers a year or so ago in *CURRENT NOTES* in which he described *The Final Word* as an ocean liner. Well, if that was so, then *WordPerfect* is a battleship. I was going to call it an aircraft carrier but the symbolism fails since many desk accessories cause *WordPerfect* to crash when you attempt to access them. Make sure you try your favorite desk accessory BEFORE you get five pages into the Great American Novel.

WordPerfect's major features comprise a Christmas wish list for word processor junkies. It has a powerful text editor, an integrated speller and thesaurus, an outline processor, mail merge and macro capabilities, multiple on-screen type styles, and printer drivers with multiple, non-graphic font capabilities (provided your printer is capable of multiple fonts). Let's look at each of these areas in some detail.

Installation

Before you can get started with this program you have to install (customize) it for your particular system. *WordPerfect* supports both single and double-sided drives as well as a hard disk.

The program itself comes on six, count 'em, SIX, single-sided disks! Some of them appear to be extended format disks too, so *WordPerfect* gives you their own disk copy program to make backups. This is helpful because many copy programs do not work on extended format disks. Not that *WordPerfect* is copy-protected (it's not), but some of the disks contain more data than it is usually possible to store on a single-sided disk and this makes it difficult or even impossible for some copy programs to duplicate.

The start program is called `WP_START.PRG` so don't run `WP.PRG`. The greeting screen will allow you the option of calling up a particular file to edit, designating an active macro, resizing the edit buffer (but not lower than 16K) which you might wish to do in order to free additional RAM so you can open more windows (up to four max but only two on a standard memory 520ST). When you re-size the edit buffer, it will affect the size of the document you can hold in RAM. Once the edit buffer is full, the program will begin to use a disk as virtual memory. While this can be slow in some word processors, *WordPerfect* sets up a 40K RAM disk as Drive C which can be used to hold these temporary files. You can direct the output to a floppy disk, but understand the program will slow down when it must access the disk. Also, be sure to leave sufficient room on the data disk to hold the temporary files.

This RAM disk is supposedly reset proof. So if the program locks up, you shouldn't lose the temporary files *WordPerfect* was using. However, it can cause an error message to the effect that the program cannot open the temporary files (since they are still present). *WordPerfect* can be instructed to make a backup of the original file each time you select the save command and it can also be set to make a backup automatically each time a preset time limit is reached. The backup files can be directed to any disk, but it's probably not a good idea to use the RAM disk because power interruptions can cause you to lose your backup files. You cannot resize the RAM disk provided and, since *WordPerfect* insists on calling its RAM disk "Drive C", other commercial RAM disk programs which cannot install a RAM disk as Drive C cannot be used.

The install program and attendant instructions were not easy to follow, especially when it came to installing the printer. I am not a neophyte at printer drivers, having installed many and even written several myself, so I know if I found the process somewhat confusing and unclear others will too. The only advice I can give here is to be patient, follow the directions carefully, and work only on a backup disk.

Calling up the Default screen need only be done the first time, then once you've set it up for your system, the next time you run the start

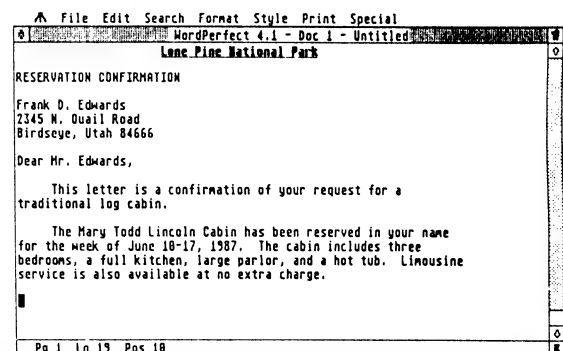
program and see the greeting screen, you can instruct *WordPerfect* not to display the Defaults until you call for them. The Default screen permits setting the system paths so you can tell *WordPerfect* how many drives you have and how you intend to use them. It also permits setting the edit operation and document format defaults, choosing the file backup option you want, instructing the program when to sound an audible beep, customizing the screen font, cursor, and pointer, and setting the barlock option. The last two are interesting options.

WordPerfect permits one to select between two screen fonts (an 8x8 or a 8x16 version). The larger screen font (on the color monitor) would be very helpful for those users with poor eyesight or poor screen resolution. On the monochrome monitor, the larger font is almost a necessity since the 8x8 font is hard to see (unless you have adjusted the vertical and horizontal sizing of your monochrome monitor). Choosing the larger font means you won't get as many lines of text on the screen. You still get the same 80-column presentation. Choosing either permits customizing the shape of the cursor and the pointer for that font — design a shape that pleases you and change it whenever you want.

The barlock option is similar to a program called *Mousetrap* which appeared in one of the ST magazines. If selected with *WordPerfect*, it will "lock" the menu bar and prevent the menus from accidentally dropping down. To access the menus, simply click the right mouse button. The pointer will fly straight up to the menu bar and drop down the appropriate menu. Once you get used to it, it is very easy to use and it makes you wonder why TOS wasn't designed that way in the first place.

The WordPerfect Edit Screen

Once you get past the Default screen, you find yourself at a more-or-less familiar GEM-edit screen. Even here *WordPerfect* goes a step further than most. The basic outline of the screen is black-on-white, but the pointer is red and the text you compose is IBM-blue. The menu bar lists the following options: File, Edit, Search, Format, Style, Print, and Special.



Dropping down each menu in turn reveals a long list of choices, many of them leading to other menus, and some of them leading to yet more menus. At the bottom of the screen is a page, line, and column counter. The cursory examination also reveals that for nearly every mouse command, there is an equivalent keyboard command employing the function key either by itself or in combination with the shift, alternate, or control keys. For those of you who don't like to take your hands from the keyboard, you'll very rarely have to. I have been told (and confirmed through my own experience) that the mouse commands work better with the color monitor than with the monochrome monitor.

FILE MENU. Under the File menu are the commands NEW (for opening another window), SWITCH (for moving between screens), RETRIEVE (for loading a file from disk), SAVE, APPEND (for merging files end-to-end), EXIT, and LIST FILES which is the most powerful of the commands and leads to a secondary menu.

The **LIST FILES** submenu has (among other commands) DELETE FILE, RENAME FILE, PRINT FILE from disk — in the first ST version of *WordPerfect*, this command didn't work. There is an update out already which fixes that bug along with nearly twenty more. So if this command doesn't work, contact the *WordPerfect* 800 number in your manual to get the update.

Another option in this submenu is **TEXT IN** which permits importing an ASCII file into *WordPerfect*. I was unable to make it work properly until a friend told me to go into the "Reveal Codes" section and perform a conditional search for hard carriage returns, replacing them with spaces where desired. Not very elegant but otherwise, while it is possible to import a text file, it will not format properly. I tried one public domain program which converts ASCII files to *1ST WORD* files, but it was incompatible with *WordPerfect*. I understand there is already a program out which will convert a *1ST WORD* or *STWriter* files to *WordPerfect* format, but I have been unable to find it on any of the BBSs.

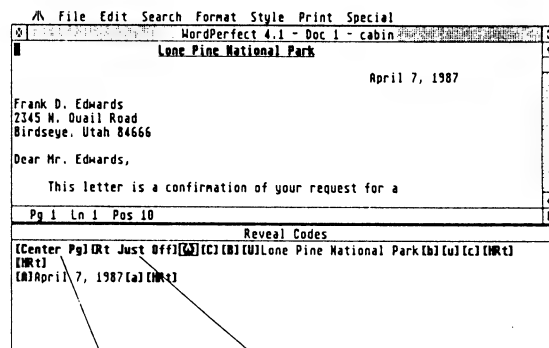
Also on the same menu is the **WORD SEARCH** option which permits searching all of the files in the specified directory for the occurrence of certain words or phrases, invaluable if there are many files on a disk and you cannot remember which one you want. The result of the Word Search will be a list of files in which the target word or words have occurred. The **LOOK** command permits a cursory examination of each unformatted file to determine which one you want.

EDIT MENU. The edit menu holds few surprises. There are DELETE and UNDELETE options. The delete buffer holds the last three deletes, so you'll very seldom lose anything by accident-

ally erasing it. This menu also holds the standard BLOCK commands. I wasn't particularly happy with the way they worked, especially the block commands with the mouse option. I feel they are rather clumsy in operation. Other word processors such as *Word Writer ST* do it better. This is one of the very few features of *WordPerfect* that doesn't live up to its own standards.

Also in the Edit menu is a **CASE CONVERT** command for converting between upper and lower case. It even does it intelligently! If you are careful to include the punctuation, it will leave the first letter in each sentence in upper case. Of course, it can't recognize proper nouns, but you can't have everything. You might not need this feature often, but when you do need it, you'll find precious few other programs offer it.

There is also a **REVEAL CODES** command which you will come to hate. If you want to remove the underlining or bolding you selected earlier, you will have to employ this command to locate the implementing code in order to eliminate it. It's the ugly scaffolding hiding under the graceful GEM exterior. Probably necessary because of the sheer power and complexity of the program, but clearly showing its MS-DOS roots.



Center Page code

Right Justification Off code

SEARCH MENU. The search menu doesn't hold any surprises, you've seen it all before except for the **GOTO** command which permits rapidly placing the cursor. It's intriguing because it's coupled to a search function. Very nice.

FORMAT MENU. The Format menu is another level of sophistication. The first four commands are LINE, PAGE, PRINT, and DATE. The LINE format menu contains the Tab, Right and Left Margin, Spacing, and automatic Hyphenation settings. The **PAGE FORMAT SUBMENU** contains very complete pagination commands, page centering, multi-line headers and footers, and commands for eliminating widows and orphans. The **PRINT SUBMENU** permits a selection of various pitches/fonts and setting the underline style and the number of lines per

inch — assuming your printer can do these things. It also contains the right justification command, permits sending special codes to your printer (useful for color printers), and selecting the sheet feeder option. The DATE SUBMENU permits selection of the date format. *WordPerfect* can insert the current date and time anywhere in your document.

Also in the Format menu are Centering, Flush Right, Tab Alignment, Indent, and Margin Release commands. You have to be careful which indent command you use because one indents only the left margin and the other indents both.

STYLE MENU. The Style menu contains Bold, Underline, Italics, Superscript, Subscript, and Overstrike commands among others. Bold, Italics, and Underline appear as such on-screen but Superscript and Subscript do not. They both appear full-sized and, quite frankly, I do not understand why since other word processors manage the on-screen formatting. The overstrike doesn't appear on-screen either, but that I understand.

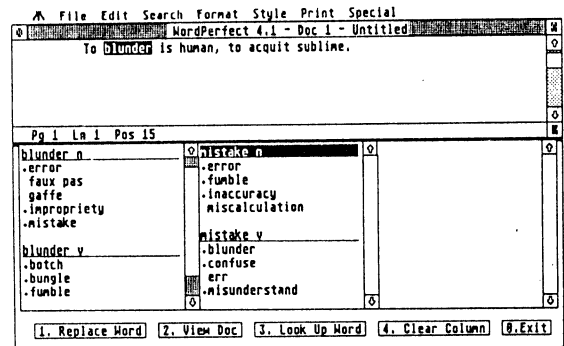
PRINT MENU. The Print menu allows printing of Full Text, a Page, a Block, or going to the Control menu. The PRINTER CONTROL SUBMENU allows positive control of the printer or printers over a number of print jobs.

SPECIAL MENU. The Special menu contains the MACRO DEFINITION and MACRO INVOCATION features of the program. Macros are very useful features in a word processor. They permit you to store (in memory or on disk) a sequence of predefined keystrokes which can be called up automatically when you invoke the triggering shorthand expression. The keystrokes can be a name, an address, a paragraph, or even a sequence of *WordPerfect* commands. The Macro Definition command permits selection of the keystrokes you wish to store and allows naming them with the shorthand expression you choose. The shorthand expression can be a group of letters by themselves or in combination with the Alternate, Control, or Shift keys. If you select the Alternate key in combination with a letter as the name of the macro, the macro will be invoked automatically when you press the combination. But should you decide to name a macro without including the Alternate key, you will have to select the Invoke Macro command before the program will be able to identify the stored keystroke sequence.

The Special menu also contains the command to invoke the SPELLER. The speller in *WordPerfect* has a 115,000 word dictionary which can be customized for your own use. It presents suggested spellings (including phonetic suggestions) in case of a word it does not recognize. It is capable of wild card searches of its dictionary and will find double occurrences of a word and words with numbers. It will not check your

spelling interactively (a la THUNDER!) but I've never liked a speller that nags me about my typing anyway.

The THESAURUS program is a multi-tier resource for synonyms and antonyms. If you don't like the suggestions *WordPerfect* comes up with, pick the one closest to the one you want and you will get another set of suggestions. If that doesn't work, try again on a third tier. Like the speller, it is a very sophisticated accessory.



This menu also includes an impressive automatic FOOTNOTE/ENDNOTE generating capability, an adequate OUTLINE PROCESSOR, very impressive MAIL-MERGE functions, the ability to REDLINE TEXT for editorial approval (I hope my editor doesn't see this). In addition it has full-featured indexing, table of contents, and list generator and simple math functions which operate over a series of columns like a spreadsheet.

One of the most impressive parts of this program is its ability to integrate its macro power with repeated searches, merges, and indexing functions using conditional logic chains. For example, it is possible to make a list of terms and then create a macro which will search your document for those terms and automatically generate an index, listing all the page numbers where the terms occur. It's a feature that will not be learned in a day or even a week. Most of us may never need it at all. I hope to goodness I never do, but it's very impressive all the same.

WordPerfect includes a simple GRAPHING function and the ability to draw borders. In fact, the power of the BORDER-DRAWING function is well beyond the capability of most printers to implement in anything but the most basic terms. It is also capable of MULTIPLE COLUMN output (up to five) and can flow text from one column to another (called newspaper style). It has a repeat key which will automatically repeat a specified character or space up to the limit you set. And it has KEYBOARD MAPPING — the ability to access through the keyboard all of the characters and symbols the Atari is capable of

generating, including international characters. The printer drivers supplied are supposedly already set up to print the character (if your printer has this capability).

Advantages

The overwhelming power and flexibility of *WordPerfect* is its biggest advantage. No other word processing program for the ST has this power and this depth, and most aren't even close.

In addition, the support afforded registered owners by WordPerfect Corporation is impressive. In addition to an 800 number for technical support (which you can usually get through on), knowledgeable representatives of the company are on GENie and other bulletin boards to support their product. The liberal upgrade policy of the company is excellent. If there are bugs in a product (such as there were in the first version of *WordPerfect* for the ST), an upgrade is sent free of charge to registered owners. If the upgrade is a qualitative improvement, such as going from version 4.1 to version 5.0, the cost for the new version is only \$35-\$50.

Another advantage of this program is its file compatibility with the IBM version of the program. That means if you have an IBM computer at work (which uses 3.5" disk drives) and an ST at home, you can bring home your IBM text file (which you have saved as a *WordPerfect* 4.1 file), plop it into your ST and load the formatted file into *WordPerfect*. (Ignore the warning that the file isn't an Atari *WordPerfect* file.) After working on the file at home, you can take the disk back to the office the next morning and load it right back into the IBM version of *WordPerfect*. You will have to chop off two control codes at the top of the document which identifies the file as a non-IBM version, but it should load without a hitch.

Disadvantages

The biggest disadvantage of *WordPerfect* is its complexity. While it is relatively simple to learn to type and print simple letters, more complex documents require more complete understanding. The very power and flexibility of this word processor only serve to increase the amount of time it will take to master it.

The lack of a print preview screen is a major drawback as far as I am concerned, its GEM-based operation notwithstanding. This is not a what-you-see-is-what-you-get (WYSIWYG) word processor. You won't see the centered page before it's printed. You won't see your headers and footers until they print. You can only hope you did the pagination right. How the footnotes look is anybody's guess until they see print.

The other complaints I have are small. The cursor may be at the beginning of a word on the GEM-screen but still be between formatting commands on the "Reveal Codes" screen. Likewise, the "Codes" cursor may be at the real beginning of a line but on the GEM screen it's in the middle of the second word. Sometimes the cursor will disappear while you are viewing the "Codes" screen which is irritating. In addition, I'm not crazy about the way overprinting can occur by accident and I don't like the fact that subscript, superscript, condensed, and enlarged text doesn't appear as such on-screen. The screen refresh doesn't appear to work properly when you are changing numbering styles in outline mode. You have to run the cursor over the affected sections to make the style changes take effect. Finally, the speller doesn't recognize double words if they are separated by a soft return.

The Bottom Line

Do you need a battleship? In other words, should you buy this program? If you are going to use it just to write letters to Aunt Emma, then the answer is NO. Likewise, if you just need it to write an occasional term paper for school, you probably can't justify the expense. But if you write technical articles or books, research papers or business correspondence, or are a serious writer of any sort the answer is YES. However, be warned that money is not going to be the only investment you will make with *WordPerfect*. Even though the manual is quite good and the tutorial is more than adequate to illustrate the major features, you will spend a good deal of time and energy to become proficient with this program. It's a matter of respect more than an effort to justify the cost, you see. And a tool this powerful just might inspire you to reach a little higher than you ever thought you could. And that's the real bottom line.

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Each title has a retail price of \$29.95. Requests for free software should be made to: ECW ATARI Software Giveaway, PO Box 408, Great Falls, VA 22066. Enclose \$4 per software title to cover the cost of shipping and distribution. Please specify desired title(s). Offer is good while supply lasts.

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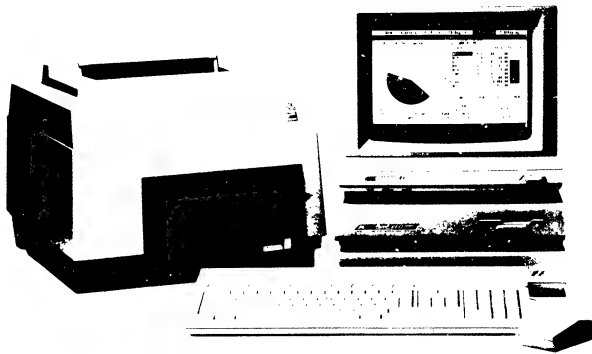
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UPDATE : ANIMATION

Make It Move ... Aegis Animator

Review by Bill Moes

It started about a year ago. The early animation software for the ST was sophisticated and powerful. Today, as still additional animation releases become available, a couple of the first kids on the block are receiving a little more strength or a little more polish.

Now, owners of those early versions will want to consider an up-grade; others will want to remember that software one year old isn't too.

MAKE IT MOVE 2.0

Make It Move (CN March 1987) has, as one of its greatest strengths, the presentation of full screens. This feature has been greatly enhanced in the new v.2.0 release.

In addition to the screen wipes in four directions and the other ways of presenting full screens that were present in the earliest version, you can now present screens with a dissolve, a spiral effect, by replacing a screen from the outside or from the inside, or by switching to a new screen with a series of vertical stripes. The size, or speed, of these effects can be altered over a wide range.

Colors can now be adjusted within the animation script by raising or lowering the red, blue, or green component of any selected palette color. This can be done as you deem appropriate at different points in your show. These changes will not affect the original file colors.

The other tools in *Make It Move*, such as the powerful use of zooms (H, V, both axes) and the movement or animation of objects, remain much as before. Rene De La Briandais, the author, has smoothed the use and eased the process of creating scripts or changing animation sections you've already completed. Also, you're now able to leave short notes to yourself within a script (which have no effect on a running animation).

The new v.2.0 is a two-disk set. The program files you'll end up using can easily be put on one single-sided disk. The second disk in this package is a series of demos designed to show off the software.

I am not very enthusiastic about having that five-lesson set of demos included as part of the

software package, although it's understandable that the author would want to have his efforts shown in the best possible light. I think it would have been far more helpful if that second disk had been planned as a hands-on tutorial with graphics files and some step-through directions for new users. As it stands, you'll have to load one of the demo files into the Script program and analyze it yourself.

The documentation is a 30-page booklet. It includes a brief explanation of the software, a glossary, and an index. It also includes three pictures that, in my copy, were too dark to be legible.

Make It Move 2.0 is distributed by MichTron and lists at \$69.95, or \$20 more than before. An update from earlier versions costs \$30. You'll need to call for a return authorization number before returning your original disk.

Service from MichTron was very good and it took only four days to receive the update. Unfortunately, one file on my updated disk was scrambled and the disks had to be returned. I received working disks about a week later.

Make It Move 2.0 remains an enjoyable and easily used animation program, capable of sophisticated special effects in the presentation of full screens or smaller graphics objects.

AEGIS ANIMATOR ST

The new v.2.10 of *Aegis Animator* (CN April 1987) corrects some minor bugs, makes the mouse more sensitive to position, and cleans up the drop-down menu use.

To obtain v.2.10, send \$10 and your original disk to: Aegis Development, 2210 Wilshire Blvd., Ste. 277, Santa Monica, CA 90403, Attn: Updates.

If you are a heavy user of this software, you'll appreciate the changes, minor as they might seem.

[MichTron, 576 S. Telegraph, Pontiac, MI 48053 (313) 334-5700 ... Aegis Development, 2115 Pico Blvd, Santa Monica, CA (800) 345-9871.]

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F-15 STRIKE EAGLE

New and Improved?

Review by Roger Abram

I first got *F-15 Strike Eagle* for the Atari 8-bit computer three years ago for Christmas. In between putting together toys for my daughters and attending to other family duties, I spent a large part of that Christmas day destroying primary and secondary targets in such far away countries as Libya, Iran, and North Vietnam. Never mind the obvious contradiction -- suffice it to say that the game was an addicting one with great action and it didn't matter that it was a day of peace.

And now, three years later and over \$1,000 invested in a new computer system, I again find myself flying the same missions in the same hostile territories. But, there's only one thing missing -- renewed excitement. Aside from the enhanced graphics that the ST version offers, there is very little that has changed from its 8-bit predecessor.

Written around a 48k memory restraint, the 8-bit version pushed my Atari to its limits. Given the opportunity to use the memory available in the ST, you'd think MicroProse Software wouldn't be satisfied with just a "port over" conversion but would add to the program in the same manner that Bruce Artwick and subLOGIC added so many new and outstanding features into the ST version of *Flight Simulator II*. After booting that disk, you realized the potential of the ST and felt justified in purchasing a new version of the program.

This is my only disappointment with the ST version of *F-15 Strike Eagle*. If you still own your Atari 800, XL, or XE, and are still attacking Libya, Iran, or Iraq, I don't recommend that you upgrade to the version for your newer computer. If you are a new ST owner and have never been exposed to the game, then read on.

F-15 Strike Eagle, by MicroProse Software, is an excellent jet combat simulation in which you are at the controls of one of aviation's finest fighting machines. Armed with a rotary cannon, long and short range missiles, bombs, sophisticated radar, flares, and Heads Up Display, you fly into hostile territory to destroy as many targets as possible.

Your mission would be a lot simpler if everyone in these countries were too busy watching "I Love Lucy" reruns on TV to pay

attention to you. But they're not. As a matter of fact, they've sent a couple of surface to air missiles to greet you at the border. Time to earn your pay.

The F-15 cockpit is divided into four main areas with the largest one filling the top half of your screen. This is the view of the outside world. It is here where you can visually monitor the movement of your craft, enemy missiles and planes, plus pertinent information flashing on the Heads Up Display. The lower left section of the screen is a map of the country showing all primary and secondary targets. In addition to the primary targets, which differ from mission to mission, most potential targets are either SAM missile sites or enemy airfields. Your airplane is also represented on the map to help monitor your location. The lower middle of your screen provides the Radar Electronic Warfare Display where missiles, planes, and target sites can be observed. The lower right area keeps you informed of how many missiles/bombs/flares are available. In addition to the above, there are also indicators for low altitude, engine power, fuel supply, fuel low, enemy infra-red and radar warnings, speed, pitch, roll, rpms, altitude, and heading.

You have your choice of electing to fly in eight different historic scenarios: Libya (8/19/81), Egypt (10/6/73), Haiphong (4/15/72), Syria (5/12/84), Hanoi (5/10/72), Iraq (6/7/81), Persian Gulf (6/5/84), and new to the ST version, Libya (4/15/86). In addition to each scenario varying in levels of difficulty, there are four overall skill levels -- arcade, rookie, pilot, and ace. As the levels increase, it becomes increasingly difficult to destroy enemy targets and there are more (and better) missiles and enemy planes on your tail.

All in all, *F-15 Strike Eagle* is a fine program loaded with action. I wish this new version had incorporated better terrain graphics (sector lines on the ground is the major device used to simulate movement) and perhaps a scenario construction module to create your own countries and missions. But you can't have everything.

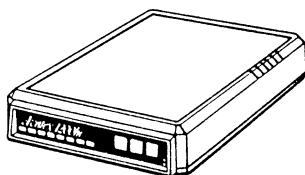
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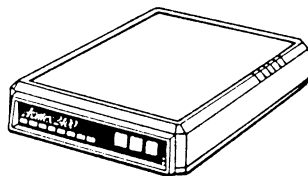
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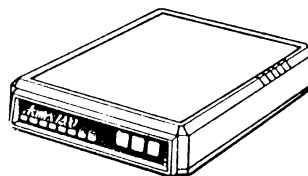
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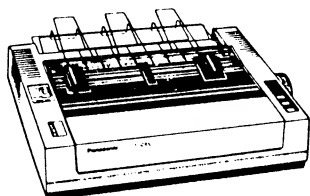


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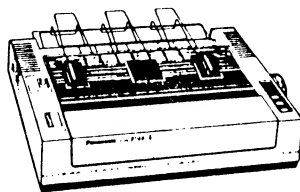
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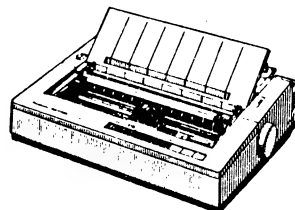
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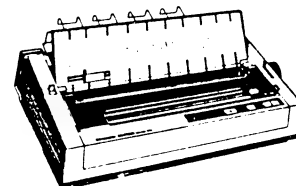
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MICROFLYTE, FSII, & F-15

Flying With the Real Thing!

Review by Frank Sommers

You're hammering down the runway. The propeller of your plane gulps up the center stripe as you stay cool, avoid over-controlling, centering it just right, mentally urging the plane to reach take-off speed.

Nothing new here. You've done it 10 or 12 times before, except that now, as you clear the A-7 runway and bank right to come back down along it and try for a practice landing, you have high hopes, nervous hopes, but high hopes. Hopes that this time your landing won't end in piling into the ground and inevitable cracked-windshield, signalling another "failed" landing. After all, its only in *FLIGHT SIMULATOR II* that you can afford to "wipe out" this many airplanes.

But this time, you know it's going to be different. You're not flying with "a mouse". You have an authentic control stick in your hand, and though still a novice, there's no more swooping right and left as you turn into the landing strip and fight to lose altitude, and GET IT DOWN ON THE GROUND. Two hundred feet, one hundred feet, pull back slowly, now! Cut the power and hold tight on the stick in you lap. For the first time you're flying *FLIGHT SIMULATOR II* with MicroFlyte's ATC joystick for the ST and you've just completed a successful landing, your first.

The little 6x4x3 inch white metal box with a control stick and trim tabs and four up-down buttons is the MicroCube Corporation (PO Box 488 Leesburg, VA 22075 (703)777-7157) answer to the serious computer pilot. Rather than develop a "tactile conversion", (defined by the best dictionaries as the twisted relearning process that creates psychological blocks in most children) where you are forced to think of your mouse as a joystick and then learn how to change joystick controls to mouse controls for FSII, MicroCube has made computer flying the graceful natural thing it was meant to be.

Plugged into your mouse-control slot, the green eye of the remote light blinks steadily at you, signally its electronic readiness. A four-second press on the reset button, then two more taps, and you are in "proportional mode". This simply means that when you let go of your control stick it automatically centers, but the

plane stays in its dive or bank until you chose to correct it. Somehow the confidence this generates, leads even the non-flyer to believe he can get back onto the ground alive. And somehow you can too, if not necessarily with abundant grace in the beginning.

The device has an added mode, which allows you to tune the sensitivity of the control stick to match your handling instincts. Instructions are four pages. You will find, though clearly stated, that you read these several times, experimenting as you go. The reason? They retranslate the FSII instructions which were telling you how to pretend your mouse was a joystick, back into pretending your joystick is not a mouse. Confusing? Yes, that's why you'll read them several times, realizing there is no way they could be clearer; it's just your mind's problem in trying to sort out the "double conversion".

The control box has an added plus. Devoted *F-15 STRIKE EAGLE* fans, or those of you who have just discovered the program, brought over from the 8-bit to the ST, will find the night raid over Hanoi is a bit less stressful, a bit that is, as you try to avoid the electronically controlled rockets trying to turn you into a ball of bubbling red and yellow fire. The added sensitivity of the flight stick permits you to fly at mach 1.4 just off the deck as you power in toward land with the dark night sea, slicing beneath you.

Do you need it? Must you have it? No. No, that is if you're not a regular weekend pilot on *FLIGHT SIMULATOR II* who hungers after the next scenery disk so you can get ready for your next trip. After all it is hardware. It does cost \$99. Why must you have the type of control over the plane that permits you to risk flying under the San Francisco Golden Gate Bridge. After all isn't that an infraction of the Civil Aeronautical Association codes? And what's wrong with cracked windshields?

But if you know "somebody" who is FSII addicted, then make sure they have it for Christmas.

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DEFENDER OF THE CROWN

Chivalry by Sword and Joystick

Review by Mike Gibbons

DEFENDER OF THE CROWN is a game that will pit you against the Norman Lords in the pursuit of the Throne of England. The graphics, level of play, and mature programming style are adeptly molded into a challenging product. Named an interactive movie, as are the other products from MindScape, it requires strategy and arcade skills. The graphics are highly polished, and on a 1040 ST the software sets up a ram disk to speed up game play. The play changes with each game and a high degree of random events are well blended into the program. This is quite different from an earlier Mindscape release, *S.D.I.*, although entertaining, once you beat that one, you shelved it.

You enter the fray by becoming a Saxon Lord and building your lands and wealth. With the accumulation of gold you acquire armies and siege machines with which to bring down the walls of other feudal lords. The play occurs on a map of England and on various picturesque screens. Tournaments are called where you must prove your skill at the joust. This part of the adventure is crucial, and you may vie for land or fame. You also have the choice of raiding another lord's castle to plunder his treasury of its gold. During the conquest of territories you encounter other armies and quickly make decisions as to your strategy. You attack your opponents army, and change your strategy as the fight progresses. There are various options open to you such as sending your knights on a charge, making a flank attack or even running away in wild abandon.

As an interesting aside you are offered the chance to rescue a maiden who may become your betrothed. You are also given the option of ignoring her cries, but any true nobleman would leap at the chance to rescue her. The screen shows an almost cartoon-like depiction of your fight against the castle guards. I found the sword fight incredibly difficult and have yet to defeat the inner castle guard. I have been told the reward for her rescue is worth the attempt.

Crucial to the ultimate victory is your skill in the use of the catapult. You first attempt to knock down the wall of an opponent's castle. Next you choose the option of hurling Greek Fire or diseased meats over the wall in an attempt to reduce the castle's defending garrison. The graphics of the ST version easily rival the Amiga

version of this product. This product is more mature than earlier versions on other machines.

You have Robin Hood to call upon to aid your attacks, but only on three occasions will he come to your aid. I advise you to use him early in the game to take control of a Norman castle. Strike quickly in the game for all can be lost in just a few turns. I recommend you take a territory on the first round and build your income. You acquire land adjacent to you home castle then you can expand your influence. Don't joust for land early on, as it is more important to have income and build your home castle troops. After five to six turns you should be able to buy a catapult and take about fifteen soldiers out to attack a neighboring castle. Try to assault a Norman Keep, either in the very South of the map or on the Eastern edge. If you can attain three to four territories and conquer another lord's castle, then you have a good chance of winning.

An important aspect of winning is plotting a strategy and then betting it on your arcade skill at the tournament. You may pay five gold pieces to call a tournament if you feel your jousting skills are better than average. During the joust you face an animated knight bearing down on you and you have to keep your lance steady. This is very difficult, as the motion of the horse can cause the lance tip to buck and swing wildly about your target. Aim true to the black X on the lower of your opponent's shield and click the left mouse button just after you hear the clank of metal. With a little luck your lance is driven to it's mark and you watch as your opponent is knocked from his mount. Be very careful not to aim too low as you might kill the horse, which will cause all your lands and your title to be stripped from you.

DEFENDER OF THE CROWN is the topic of considerable conversation. Most call it challenging or even difficult. I call it fascinating. And not the usual arcade fare. Even though I have become skilled at the joust, I have yet to master the art of the sword. It is nothing to play this game ten times with no hint of progress, then in the flash of a lance you are the winner of the tournament and well on your way to being crowned the King of the Realm.

[*DEFENDER OF THE CROWN*, \$49.95, Mindscape, Inc., 3444 Dundee Road, Northbrook, IL 60062.]



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LDW BASIC REVISITED

Version 2.0 — Another Substantial Upgrade

Review by Stephen D. Eitelman

Logical Design Works (LDW) has issued the third version of their successful compiler package, version 2.0. There are two major features of this most recent upgrade. First, the operating environment is now a shell that allows one to compile, link and run either as a single operation or by clicking on drop-down menu selections. This is a great simplification over the separate operations required by previous versions.

Second, this version includes high level access to GEM — windows, menus, dialog boxes, mouse, mouse buttons, edit fields, etc. — without recourse to AES and VDI calls. Other additions in version 2.0 include a new set of low level GEM access functions, the use of procedures, event trapping to detect window, dialog, menu and mouse events, and a fast two-byte integer in addition to the more standard four-byte integer. This new version supports both the new and old ST Basic.

Shell

The shell is a delight to use. It is as intuitive to use as any I have seen. The locations of the various portions of the package can be specified with complete flexibility to suit virtually any hardware configuration and then saved to disk. An editor, *MicroEMACS*, comes with the software. Since I am used to using *IST Word* to generate ASCII files, I substituted it for *MicroEMACS*. Any other editor you prefer could be specified just as easily. Just tell the shell where it is and it will be called up whenever edit is specified. There is thus no need to remember precisely what you called it or exactly what the folder name is once the shell knows! All this is done from the shell menu, making the installation very simple.

Once this rather straightforward installation procedure is completed, one has only to click on the EXEC (execute) menu and select the desired operation. The selections include edit, compile, link, compile and link or a "make" operation that edits, compiles, links and runs the final program, all from within the shell and without intervention. Well, of course, the editing must be done by the user. I was particularly pleased by the ability to link automatically. Every time I used the two previous versions, I found I had forgotten the details of using the

linker and had to go through a painful learning process all over again. The compiler and linker also appeared to run faster than they did in ver. 1.1, although I did not make actual comparisons. The sieve test compiled in 20 seconds and linked in 80 seconds in this new version.

Manual

The manual is as thorough as the previous ones, but needs a little explanation. LDW simply added a new section that covers ver. 2.0 in its entirety after the manual for ver. 1.1. (The book is in an IBM style loose leaf binder.) The result of this strange arrangement is that one must begin in about the middle of the book instead of on page one. The package needs a separate sheet at the front of the book, or a read-me file on the disk, or something to warn the new user that the instructions for ver. 2.0 begin with the white pages, about half way through the manual. Otherwise, the manual is excellent. Chapter 7 of section V describes the GEM commands and other extensions to ST Basic and runs for a total of 131 pages. Descriptions are complete, covering the syntax, the action performed by the command in clear language, generally giving an example and often referring to other related commands.

GEM

About 50 high-level commands have been added to permit access to the various GEM functions without recourse to pokes and peeks. Additionally, no further GEM documentation is required — a vast improvement over the days of VDI and AES calls. In browsing the available commands, there did not seem to be any significant omissions. Everything I could think of wanting to do with GEM was covered by a high-level command.

Speed

I ran the same speed tests I used with ver. 1.1 and the results were roughly the same. There were some slight variations, some tests running faster and some slower. The tests covered a trig function in a loop, a floating point calculation in a loop, the Sieve of Eratosthenes, and a

(Continued on Page 60)

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BASIC REV. 2.0

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LDW BASIC is a powerful, integrated programming tool that lets you edit, compile, and execute your BASIC programs without exiting to the desktop. It also creates a program file which can be executed directly from the desktop. You will never have to load the BASIC language interpreter or runtime module to execute your program.

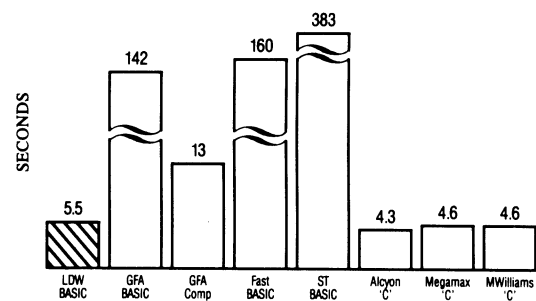
LDW BASIC Rev. 2.0 is very easy to use, yet it's more powerful than any other development system for the Atari ST. It supports a full set of high level GEM access statements and functions which let you:

- Create and use your own windows, menus, dialog boxes, buttons, edit fields and check boxes.
- Use desk accessories while running your BASIC program.
- Design your own mouse pointer shapes and icons.
- Trap GEM events.

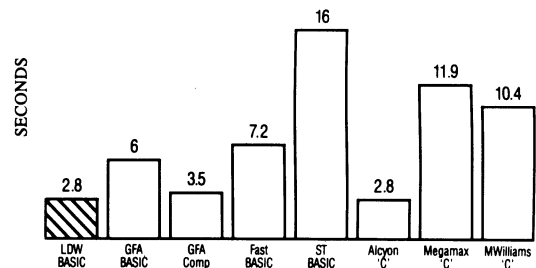
You get all this and much more. No more PEEKs/POKEs to access GEM. Among the supported statements are: ACTIVEW, ALERT, ASK FILE, ASK MOUSE, BOX, BUTTON, DIALOG, DRAW ICON, EDIT FIELD, EVENT, INFOW, MENU, MOUSE, ON DIALOG, ON MENU, ON MOUSE, REDRAW, TITLEW, WINDOW and about 40 more new statements.

LDW BASIC Rev. 2.0 is a stand-alone development tool, but it can also compile any program written using the old ST BASIC interpreter or the new ST BASIC interpreter. It is also functionally compatible with BASICs for the Macintosh.

Compare the following benchmarks and see why LDW BASIC Rev. 2.0 leaves the competition behind!



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BREACH

Combat Mission Into the Unreal

Review by Donald C. Lyles

Although I have used my computer for other than business applications (please don't tell the IRS), I must admit that I am still a novice at game playing.

BREACH is a military combat game. As the player, you are pitted against an enemy whom you can best by achieving any one of three objectives (termed "victory conditions"):

- a) rescuing prisoners
- b) capturing "datapacks" and
- c) killing a specific percentage of your opponents.

Your fighting force are your "always ready" marines. Each is outfitted initially with only their guns and armor. Additional objects can be picked up and utilized during game play, and their existence and use are factored into your ultimate score. The player selects a squad leader, as a "main character". Your long range goal is to "improve" this character, to make him an even mightier and more invincible warrior.

Even though I am unaccustomed to reading instructions to learn how to play a game, your first order of business in *BREACH* is the manual.

It describes in detail the game, the opponents, which are numerous, the different scenarios (terrain and battle conditions), the squad leader (the only default is squad leader Smith) and what to do next.

To begin play you must first select a scenario and then a squad leader to create a game file. Once this is done the player selects (using GEM) the mission briefing which contains background information for the mission with some possible clues and finally the player selects victory conditions which specify your goals to win the game.

Movement by each of your marines costs "movement points" which affect not only the marine's vitality but the combat readiness of the entire unit. Further, depending upon the type of terrain to be covered, various movements can cost you a higher level of movement points. As in real life, picking up and carrying additional weaponry depletes your energy ("encumbrance value") and is factored accordingly. Marines must contend with opponents who appear in the

form of beasts, aliens, battle robots, overlords and autoguns.

Game play in *BREACH* is progressive. You must complete the first game before being allowed to move to the next game and scenario. Moreover, *BREACH* can be tiered into different levels which the player himself/herself designs using the scenario building program. The player also has the option of saving the current game in progress or of starting from the beginning again, when shutting down for the duration.

BREACH is not copy protected, but does have a security check prior to game play requiring the player to enter a word from the manual whose location is provided in a GEM dialog box. The password changes randomly each time you power up.

BREACH can be played on a 520 ST, but requires a color monitor or alternatively a color tv with a 520 STFM. There is also a version of *BREACH* for the Mac. *BREACH* comes on two disks and will not run off of a hard drive. *BREACH*, which is authored by William G. M. Leslie III and Thomas R. Carbone sells for \$29.95 and is published by Omnitrend Software, Inc. The publisher provides a telephone assistance program which operates several times a week, but they will not offer any suggestions on game play.

A Christmas wish list item? Well, *BREACH* is a quieter alternative as Santa's present than the latest toy gun on the market.

LDW BASIC (Continued from Page 58)

random string exercise that created, sorted and printed out 1000 strings.

Price and Availability

Version 2.0 will retail for \$89.95. Owners of ver. 1.1 can upgrade for \$25.00 and the serial number of their ver. 1.1 compiler disk. As of this writing (October 1987), retail distribution of ver. 2.0 had just begun. Outlets carrying earlier versions will be carrying ver. 2.0, so by the time this appears in print, your favorite dealer should have it in stock.

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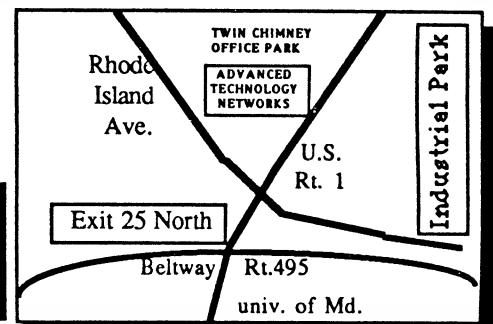
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OSS PERSONAL PASCAL V.2

Some Day They Will Get It Right

Review by J. Andrzej Wrotniak

It took OSS a week to charge my credit card and four months to ship the goodies, but finally my parcel with the new version of *Personal Pascal* arrived. This is an important event in the ST world, as there are probably more people out there programming their ST's in *Personal Pascal* than in any other language dialect (don't even mention ST Basic, please).

The popularity of *Personal Pascal* has good reasons: its Version 1 was the most painless introduction to GEM programming I have seen, being also a very decent implementation of the language standard, well-documented and with very few (from Version 1.10 or so up) bugs. It also was inexpensive, and the manual itself was well worth the \$50 I have paid for the whole package.

The Good News

Not only gradual improvements were introduced in this version; some major work was done as well. The major changes are: new shell and editor, expanded library, removed 32k limitation for a data type (in most instances read: array size), improved (still) documentation, general cleanup and debugging. With some exceptions (hopefully remedied soon), a nice and well-thought job was done here.

Here is the quick walk-through; the bad news (also quite a lot of it) and the bottom line follow near the end.

Programming Environment

The shell will look very familiar to the users of Version 1, but the design is better. You may perform disk operations without leaving it (goodbye my trusty Diskman accessory!), you may print files (by calling an enclosed printout program, which may be replaced with any other of your choice), and you may very flexibly decide, where the shell will look for compiler, linker, libraries or the source files. For those who like to run things from a RAM disk, the last one is a very welcome feature.

The entirely new editor is a vast improvement from the original version. It is GEM-based and allows you to edit three documents at a time. It is also very fast (not as fast as *Tempus*, but faster than anything else), and — again — quite well-designed. (Read on to see what is wrong with it).

Compiler, Linker and Libraries

I have recompiled and relinked four of my old programs (the largest one 150k of code) without any difficulties. The only exception was due to a bug (wrong radius of an ellipse in a window) present in Version 1 and now corrected — I had to remove instructions working around it. The compiler is still very fast (the large program took 90 seconds to compile and link from a RAM disk, with my own libraries read from a floppy). On the other hand, no desktop accessory would compile properly — an obvious bug.

The language dialect itself introduces some relaxation of strict standard Pascal type-checking rules, and does it in a very reasonable way (e.g. two separate types are compatible if they are structurally equivalent). In general, it compares favorably with most others on this or other machines.

No open (variable-size) array parameters are provided (contrary to some early rumors), but this limitation can be easily bypassed by type-cheating. If you want to know how, see the July issue of CURRENT NOTES.

The REAL variables are still six bytes long (which gives you more than 10 decimal digits of accuracy, in-between the standard single and double precision), and I do not miss the double precision much. Also, the floating point libraries (as the trig and log functions, for example) were re-worked and deliver now the full accuracy (previously about three decimal digits less).

The general impression is, that the cleanup was quite significant, even if not so obvious at first glance. I have counted at least eight bugs (or annoying features) fixed, and there are certainly many more improvements I haven't noticed. On the other hand, some new bugs were introduced (see the bad news below), so the bill of health is not as clean as I had expected.

The GEM library was expanded, as well. Nothing really spectacular, but many useful additions. These include, among others, screen buffering, the whole set of Peek and Poke routines, VT-52 commands (previously available in the public domain, anyway) and few others. Obj_ReDraw, a significant omission in the old version, is also included (at least documented,

but does not seem to be in the library -- strange).

More Good News: Documentation

The original manual ranged from good to very good; the new one -- from very good to very, very good. The paperback looks much thicker than the previous one, which is mostly due to larger print (*Publishing Partner??*) and more empty space left on pages, but quite a few things were added and a detailed comparison shows that a lot of re-editing work was done, too. *Mark Williams C* may be the only compiler with as good, or better, documentation available for our computer.

If you program in another language, such as FORTRAN, the language reference section is enough to teach you to code in Pascal, in spite of the author's claims (or disclaims?) to the contrary. A subject index was added, and as much as I try, it is difficult to find anything (well, almost) missing.

Only two small additional improvements come to mind: a short summary of differences from the Pascal standard, and list of changes from the previous version -- I am sure some, if not all, users would find those quite useful.

The Bad News: Bugs

My complaints and reservations can be divided into two categories: bugs and features (or design flaws).

Obviously, the product was rushed to the market. OSS announced, that the compiler was under beta testing in May (that is when they started to accept the money). This is hard to believe: some of the bugs in the new version are so obvious, that they do not require any sophisticated test matrix to be identified. Do you folks really mean, that in four months none of your crowds of beta testers has tried to compile a simple desktop accessory? (Yes, you've guessed, this just does not work.) Do you mean that nobody tried to declare all the auxiliary library procedures just to check the spelling? (Yes, you are right, some of them seem to be missing or wrongly documented).

To use the famous Ted Koppel's phrase: Come on, come on, Mr. Pozdnyakov! You do not need industrial testing procedures to discover these kinds of bugs: just give the compiler to three smart hobbyist programmers and they will bring you the whole laundry list in a week.

The editor crashed on me four times in three weeks (three times after saving the file, thus only mildly annoying, and once upon reading) without any obvious reason; this, of course, has no right to happen.

More Bad News: Design Flaws

For me these are even more irritating than bugs. The bugs just happen, while the design flaws are intended to be a part of the package. Somebody there thinks I should live with them.

Let us start from minor things. As I have mentioned before, the programming environment is a major improvement from the previous version -- in principle, that is. Some details, however, spoil the otherwise good image.

The shell uses its own file selector dialogs, which are quite functional, but do not have the right feel: much larger than necessary, require running your mouse all around the screen. (They also look ugly, which is, of course, a matter of taste.) But the editor, once entered, uses the standard GEM selector, and does not remember the directory passed to it from the shell -- another irritating oversight. Seems like a last-minute patchwork.

Many may not like the fact that you can view each document only full-page, switching the pages as necessary. Even a simple half (or one-third) page windowing would be a very desired addition. Also, the find-and-replace features are implemented in an unorthodox, confusing and inconvenient way.

Here we come to another feature missing in not only the OSS's editor, but in many others, as well. I am sick and tired of switching my keyboard habits every time I use another file editor (or word processor) -- and I am not the only one who switches at least three or four times a day. I understand that different editors may have different features, but the basic (and most frequently accessed ones) are always the same: mark a block, delete a line, delete a word, undelete, move around the screen, etc. We all know, that making the keyboard functions user-definable is not something expensive or difficult to implement -- is anybody from OSS listening to this??

Coming back to the language itself, my main reservations concern the modular compilation. It is still not as useful as it could be. There are two reasons for this.

First, it is possible to use in your separately compiled module any variables not local to its procedures only in the most awkward way imaginable: you have to re-declare all the variables from the main program. This means, that (1) they cannot be shared only between the procedures in the library module, without being accessible to the main program, (2) each time you use such a module with a new program, the module itself has to be modified and recompiled.

This nullifies a large part of the advantages of the modular compilation, and the solution adapted in *Prospero Pascal* (variables shared only at the module level) makes much more sense.

Second, the linker is not smart, i.e. it includes in the final program all procedures from a linked module, regardless of whether they are called from the others or not. This again means, that usually you will have to customize (and recompile) the library modules for each new program.

The regular libraries, PASGEM and PASLIB, are (of course) linked in a smart way, that is, on an as-needed basis. They cannot be, however, expanded, as the package does not include a library manager. A pity.

The Bottom Line

In spite of the criticism I may have towards *Personal Pascal*, I found Version 2 worth recommending. The features, performance and feeling are significantly better than in Version 1 (which was pretty good by itself), and the price is very good.

Knowing the traditionally good OSS performance in customer support I believe, that the bugs I am writing about will be fixed soon — maybe even before Christmas (my version number is 2.01, just in case).

More, on the ST Pascal field, OSS does not seem to face any significant competition: I am still waiting for the promised new release of *Prospero Pascal* ("certainly before the Fall", they've said...), but the wait for *Prospero* may be long and the outcome uncertain.

If only OSS (or CCD in Germany, where *Personal Pascal* was made) could devote some more design thought to the user interface and the modular features, the compiler would be hard to beat — for any computer, for any price.

My advice is short: go and buy it (and then watch for the fixes). You will not regret it.

Last-minute Update

After having written this review I logged in to the OSS bulletin board in California (this is, by the way, a smart, nice and inexpensive way to provide decent user support).

Yes, the company is aware of the bugs I have mentioned (and some others, too), and there is a list of them posted. I found this honest and useful. The fixes are being promised real soon (whatever that means). The worst thing is, that the new editor does not work with the new blitter chip or new ROMs (but if you can afford a Mega,

you can spend an extra \$40 for *Tempus*).

I will watch the news periodically — expect a brief update in the next (February) issue of CURRENT NOTES.

Merry Christmas to all Pascal programmers — and all the Atari freaks at large!

Tackle Box v.2

Review by J. Andrzej Wrotniak

Although coming from an independent source, this is a related product (being marketed by OSS). I am writing this review with very mixed feelings.

Tackle Box is certainly the heaviest piece of software for the Atari ST, containing two disks of ARCD files (roughly 50% of it GDOS fonts) and the biggest imaginable folder with nicely printed documentation.

The basic part of the disks are libraries of procedures to access various GEM and TOS functions in a way very similar to the one used in the Alcyon C library in the Atari ST Developer's Kit. If you do not like the decisions made for you by the authors of *Personal Pascal*, now you may make all the calls in the more elementary (sometimes less convenient) way — and no feature is inaccessible any longer. More — as the calling sequences almost exactly match the C ones, many of the published examples in C may be easily ported to Pascal (who said C is a write-only language?).

This is the principle. However, when some of the routines seemed not to work properly, I went into the enclosed Pascal code. Unfortunately, what I found can be described as a mess.

If a student taking a programming class tries to return results from a procedure by a value (as opposed to VAR) parameter, he just fails a test. If a professional (and whoever charges money for his work pretends to this name) does the same in more than 100 separate instances in the same library, this means, that: (1) he did not even bother to test his product properly ("seems to work just fine..."), (2) something is generally wrong.

Many of the *Tackle Box* routines have their exact equivalents in the *Personal Pascal* system libraries (peek/poke, VT-52, date/time, screen buffering and numerous others). This also leads to unnecessary confusion and may need some cleanup work.

There are also some other pieces of very ugly programming in the enclosed math library, so the code is not very useful, unless you are willing

to devote some time to do a solid cleanup work yourself.

On the other hand, I do not regret my 70 dollars spent for the *Tackle Box*. The enclosed GEM and TOS documentation is as complete as the one coming with the Atari Developer's Kit and -- in most cases -- better or much better. In many places the author provides additional detailed explanations; in other places, he limits himself to just rephrasing the DRI documentation, errors included. True, 1/3 of the thick book is just a xerox copy of the Motorola 68000 chip, but the remainder contains many quite interesting items, including the memory map, useful information on the sound generation (proper procedures and a demo program enclosed), and others, some of which I am still discovering one by one.

To add all this (and more) up: do not expect the *Tackle Box* to be an off-the-shelf subroutine library: well-written, tested and ready to use. However, if you program in Pascal (not necessarily the OSS one), and if you feel you need access to more features than the OSS high-level libraries provide, then the *Tackle Box* may be for you.

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RINGS OF ZILFIN

Bilbo Would Have Liked It Here

Review by Robert Millard

It all began with a story about rings, didn't it? All of this questing, spell-casting, mapping, and slaying of creatures fantastic, is the progeny of four books that, though profuse with imagery of bold adventurers braving forbidden lands, managed to maintain considerable charm. That charm, lost in the transition to computer game format, returns in SSI's *Rings of Zilfin*, now available for the ST. Previously released for Apple, Commodore, and IBM, *Rings of Zilfin* (ROZ) emphasizes animated graphics, and so its sixteen-bit enhancement further strengthens its strong suit. Nonetheless, it may not be for everyone.

Within a few minutes, ROZ may look vaguely familiar. That lone adventurer with his feathered cap and jaunty gait; the land of Batiniq, drawn with detail, perspective, shading, and an intentional cartoon quality that well suits the characters and occurrences of this land — why, it's Graham of *King's Quest* fame! Well, that's what this game would look like if Sierra had made better use of the ST's graphics capabilities. In fairness to LDW (who converted *Phantasie I* before undertaking this effort), ROZ's artwork is much better than the *King's Quest* series, but there are similarities. Don't expect the "look and feel" clause to apply, though. This is an animated fantasy game. KQ is an animated text adventure.

Rings of Zilfin uses a unique concept to create its world. Reis, the hero's default name (any four letter name may be substituted), begins his quest with an on-screen map that resembles a color version of those arcane charts in Tolkien's books. Only terrain is represented, but a rosette indicates in which directions roads exist, and since only road travel is permitted, a choice must be made. The network of roads connects nearly 70 locations on the map. (The game takes up three disks and almost 900K.) Locations are almost always confined to a single screen, and may depict a town, village, or a particular spot in a forest, desert, or marsh that microcosmically represents the journey through that topography. Towns look somewhat like the cities in *Phantasie*, but there are only three buildings to enter. Unlike *Phantasie*, in which clicking on a building calls up a dialog box, Reis actually enters the structures in ROZ, after which the scene switches to a full-screen, interior view. Between each location, though, Reis must actually travel the road, and it is the travel phase that gives dimension to Batiniq. After leaving a location, Reis is set upon a scrolling road that

always has him trekking left to right, no matter which direction was chosen. When the sky darkens, it is time for Reis to sleep. But airborne adversaries sometimes fly overhead, and if an entire wave isn't shot down with a bow, another wave of foul fowl follows. This sequence, along with similar sequences at secret mountain passes, recalls an eight-bit relic: *Demon Attack*. Purists may not care for an arcade element in their fantasy games, but the five to ten minute journeys in ROZ impart a depth to Batiniq that no scrolling land mass in any other game has achieved. Along the road there are also herbs and plants to gather, monks to query, and an occasional attack by three or four goblins. Mid-level wizard status enables Reis to teleport to adjacent locations, but some foot travel will still be necessary to obtain vital clues. A copy of the on-screen map is included in the docs to mark roads and locations.

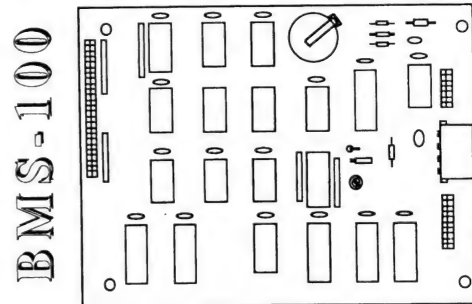
The better fantasy games share a trait with diversionary reading: one always wants to keep going, to find out what happens next. ROZ achieves this by animating most scenes, including typical fantasy situations that are usually represented abstractly. When a match is chosen from the inventory screen, Reis finds himself resting beside a flickering campfire. When a torch is chosen, a dark cave becomes light, and Reis begins walking with torch in hand, flame tips trailing slightly. If a sword attack is chosen, Reis walks toward his foe and thrusts. (He's no Errol Flynn, though: the movement looks a little like Pin-the-tail-on-the-orc.) Casting an offensive spell shrouds Reis's foes in a nebula of multi-colored pixels. In lighter moments, a barber may cut the hero's hair to the sound of metallic snipping; healers move eerily toward a bed-confined Reis; witches brew effervescent concoctions; a wizard disguised as an animal transforms and reveals himself. When the travel phase becomes drudgery, and it will after awhile, knowing that a new bit of animation is likely to be at journey's end revives the gamer's interest.

Despite all that's laudable about ROZ, the game is something of a lightweight romp that veteran adventurers may find too tractable. There are only three strength and magic levels, though the game nicely spaces their attainment. Monsters are all of the fixed type (no random generation), and there are less than 30 kinds. Once a healer is found, the game's maximum hit points can be bought, if Reis has enough gold. The many characters encountered are far too

loquacious, making the puzzle aspects of ROZ ridiculously easy. Spare the graph paper for this one, too, since only two dungeons exist in Batinig. Both are overhead brick mazes that resemble *Sword of Kadosh*. Though there are four levels in each, mapping isn't mandatory. Also, the game is of a tired breed: the single character adventure. The heavyweight fantasy games are all party quests. (An exception is MicroIllusions' stunning *Faery Tale Adventure*, available only for the Amiga. No ST version is planned for certain. The company's toll-free number is 800-522-2041.)

Okay, so there's no Stygian Abyss or Mangar's Tower for you ultimaniacal phantasy phreaks to roll up your chain mail sleeves for and sweat your way through. Still, *Rings of Zilfin* is a big game with a lot to accomplish, and it offers a good deal of eye candy in the process. SSI got smart this time with the packaging, including actual ST screen shots on the back of the box instead of the usual eight-bit images. If you like what you see, pick it up and let the game run its charming, visually appealing course. In the end, neither might nor magic will vanquish Dragos, the necromancer. Only one hope remains: the rings. Isn't that how it all began?

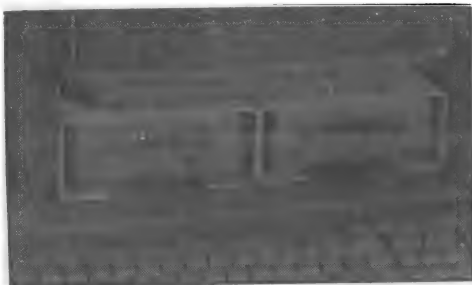
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OS9, A NEW EMULATOR?

It's Here for the Atari!

Review by Bill Brady

The Atari ST continues to pile up quite a record of capabilities. Not only can it run Macintosh software, and emulate an IBM PC, but it now has a new operating system that lets it run a whole new body of software while "just being itself". Microware Systems Corporation is now shipping OS9/6800, (OSK), for the Atari 520 and 1040 ST.

I make no bones about it, I have been in love with OS9 for years. It began for me in 1983 when I needed a "mainframe" to serve as my personal host. I was in the field a lot, and made extensive use of a Tandy Model-100 portable computer. The 100 has a built in modem, I could easily "phone home" from anywhere, and log on to my Tandy Color Computer running OS9. Since OS9 has multi-user, multi-tasking built in, (and always has), I was greeted with:

```
OS9 level 1 Version 1 Timesharing System 6/1/84
12:01:41
```

```
User Name?: Bill
Password:
```

```
Process #5 logged on 6/1/84
```

```
***** Welcome to OS9 level 1,
system operated by Bill Brady.....
```

From this point I could do pretty much anything from my 100 "smart terminal" that I could do if I were at home. I easily adjusted OS9 to the 8 line screen of the portable. Usually I just uploaded files for later processing. This greatly enhanced the usefulness of the 100 to me. Soon I had a 20meg hard drive on my "host", and was sharing files with co-workers and friends, giving each their own user ID and Password.

OS9 has been around for quite a while as a kind of underground operating system. Since it is very UNIX like, many found it not to be overly friendly to operate. But its extreme modularity, flexibility and slow but sure growth have doggedly kept it going. It is used in many ROM-based "board computer" real-time systems. People use it every day, and never know it. For example, it is the intelligence behind the internal machinations of many CD disk players, running on a 6809 cpu embedded down in the guts of the machine, flipping the relays, running timers, storing programs. OS9 has been used for years by NASA to upload and verify shuttle on-board computer program loads, and will shortly fly on board the shuttle itself as part of an optical experiment

by the University of Maryland. Right now it is "flying" aboard my new "mainframe", an Atari 520STfm, with my CoCo and my Macintosh connected as local terminals, and the old M-100 as the "remote"!

OS9 and it's Basic 09, were designed at the same time, in the same room, (by different people), as the Motorola 6809 microprocessor chip. OS9/68000 is OS9 for the 68000, (the MPF in the ST), the 68020 and 68030. OS9 comes in different levels, based on the amount of memory that the computer can handle. Level 1 is for 64k 6809 systems, while level 2 is for 6809 machines with memory mapping h/w and RAM up to 4 megs. OS-9/68000 V2.1 is what MW is shipping for the ST.

OS9 is highly modular and device independent. New devices, hard disks, CD ROMs, digitizers, tape units etc are very easy to add. All you need is a driver, (maybe one is already in your computer), and a "device descriptor", a short module that describes the new hardware to the system. This is why OS9 runs on everything from a CD ROM to a "shoe box VAX". (my term "shoe box VAX" refers to 68020 based machines that run 32 terminals and benchmark faster than a VAX 11/780, and fit, literally, into a shoe box sized case).

The OS9 shell is both fast and flexible. I won't go into detail, but it allows re direction, pipes, modifiers, wildcards etc. And this is not just an emulation of a shell, folks, OS9 was built that way from day 1. The average user won't use much of this at first, but it will be there when needed. Graphics interfaces are nice, I have one on both the ST and the Mac, but eventually they get in your way. It is so bad with the Mac, that I cannot bring myself to enjoy the machine. It is a great box to do work with, (like this article), but no fun! On the other hand, graphics interfaces are available for OS9, (multi-vue). I'll just give one example of the OS9 shell for the Atari:

```
<copy * -w=/dl/anydirectory>
```

copies the entire contents of you current directory to/dl/any directory. Copy *.PGM would copy all files with the extension .PGM

OS9 interfaces to the Atari ROM calls. This opens many possibilities.

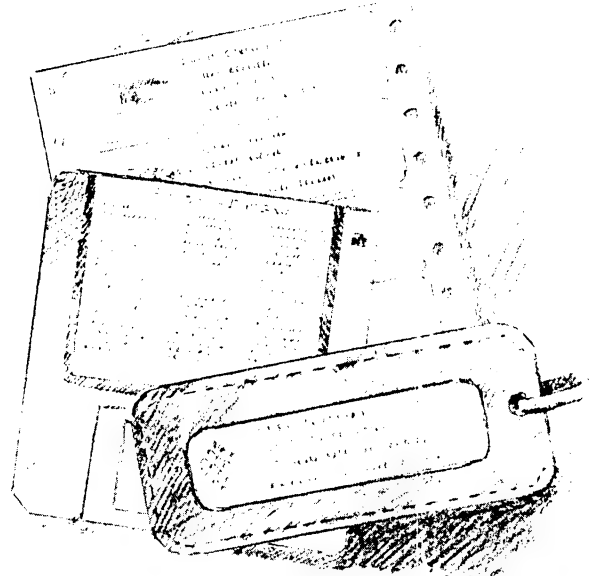
The porting of OS9 to the Atari is kind of a sad story, but with a happy ending. A company in California wanted to produce, (and did), a board

that you could plug in to an IBM PC clone and run OS9. This was a good idea at the time because people developing OS9 board systems had no low priced host for their software/firmware development. Most OS9 systems then were expensive. As part of their effort, they decided to port the operating system to the ST, and bought the necessary licenses from MW. They actually began to ship the OS9 port to Atari users. They had, however, not finished the job, and were shipping an incomplete product. It turns out that their board was not doing well, now being more expensive, (not including the necessary PC!), than an entire ST system! They went out of business. Well, this left the people who had bought the Atari package in a lurch, but Microware, as soon as they solved the legal problems, "took over" the port. This is an unusual situation for them, as they usually deal with OEM's, not the end user. We benefit, however, because we don't have to go through a third party.

In the meantime, in other areas, OS9 was gaining impressive capabilities. Level 2 for the 512k CoCo-3 now has windows. And what windows they are! Atari users are familiar with overlay windows, but OS9 has both overlay and "device" windows. What's the difference? Enormous! An overlay window is nice because it comes, lets you do something over the top of something else, then gracefully "goes away", (like a pull down menu). But a device window is like having an entire second computer, sitting next to the first, except that one keystroke instantly moves one computer out of the way and another in front of you! And you can have up to 16 device windows at one time on the CoCo! Imagine what we will be able to do with an ST with its 4x clock and huge memory! I often run a terminal program in one window, downloading a file from a host, while listing a file to the printer in another window, and at the same time am doing file maintenance in another! I then pop back and forth, using the clear key, checking each process as it goes along, no more do I have to wait for one thing to finish before doing the next. Now, OS9 could do this all along, running many jobs in the background, and from several different physical terminals, but device windows make it so easy that soon even the novice user is "popping" in and out of many windows.

An advantage of a device window is that any piece of software will run in one. The program doesn't know that it is in a window. What this really means is that any program written before the windows were available will run in any device window. There is no compatibility problem, it is not even a question. Newer programs, however, are written to use both the overlay windows, and multiple device windows on the same monitor. I am the author of Wiz, the OS9 level 2 Terminal Program, which uses up to 5 windows at once. It has a chat or conference mode where the user types in one device window, while all incoming

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messages appear above, in the main device window, all on the same screen.

Now back to OS9 for the Atari. Should the average ST owner run out and buy it? And why? The answer is probably not right now, unless you have a desire to get your hands on a multi-tasking, multi-user UNIX like operating system that makes your Atari like a mainframe, right now. I recommend owning OS9 to all aspiring systems engineers, just for the learning experience. In view of the sad story above, the delivered package is a little rough around the edges just yet. MW will improve this situation, but there is another group worth mentioning: OS9 is blessed with a user support group of some of the best computer people I know. More about that later.

Windows for OS9/6800-ST are not here yet, (1st quarter of next year, but they are not vaporware, they have been on the CoCo for over a year), when they are available, I can't imagine running an ST without them.

Software is still rather expensive for OS9/68000, about the same as comparable s/w for the Mac. Much of this is the old supply and demand thing. As the user base goes up, prices go down. Personal OS9 for the ST originally cost \$600, but is now \$150, and will discount at about \$129 or less, as dealers begin to sell it vs Microware itself. Many games are being ported to OS9 and are selling in the \$20-\$30 range. On the CoCo, many run several games at once, each in a different window! I'm not much on games, but I can give two examples, Koronis Rift and Rogue, both by EPYX, are two OS9 games that I have used.

Personal OS9, which includes Basic 00, is supported by Microware via feedback on Compuserve Information Service. (go MSC). Professional OS9 which includes ASM & "C", is supported via free 90 day Hotline support and Compuserve. More important are the Special Interest Groups, (SIGS), on both Compuserve and Delphi. Here you will find the vast users group library, and the support of many talented OS9 people. I have never had a question go unanswered here, and people have actually written software for me just because I asked!

Languages supported under OS9 include Pascal, Fortran and the 4GL Sculptor. Sculptor source can be run on over 400 processors including the IBM PC, the VAX 11/780 and under MS-DOS/PC-DOS, UNIX/XENIX, OS9, UNIFLEX, VMS and various network systems.

[OS9: Microware Systems Corporation, 1900 NW 114th Street, Des Moines, Iowa 50322 (515) 224-1929. Sculptor & much OS9 software is available from: Frank Hogg Laboratory, 770 James Street, Syracuse, NY 13203 (315) 474-7856. Feel free to contact me: Bill Brady, 1503-I Flanders Ln, Harwood Md 20776 (301) 952-1761.]

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Continued on page 4

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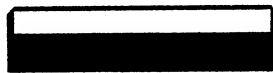
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NEW MEMBERS: Dues are \$20/year which includes a subscription to CURRENT NOTES. Join at the main meeting, chapter meeting or by sending \$20, payable to NOVATARI, to Earl Lilley, 821 Ninovan Road SE, Vienna, VA 22180.

NOVATARI MAIN MEETING is at the Washington Gas Light Building, 6801 Industrial Road, Springfield, VA. Take 495 to east on Braddock Rd (620) to south on Backlick Rd (617). Left on Industrial Rd. Washington Gas Light is the 2nd building on right.

5:30 TELECOM SIG

6:15 DOOR PRIZES, announcements, OPEN FORUM

6:45 VAST and 8 BIT SIG Meetings

Mt. Vernon / Hybla Valley, 1st Thursday, 7:30.
Contact Ron Peters at 780-0963.

Sterling, Sterling Library, 7:30-9:30, 1st Wed.
Contact Wayne Wilt 437-6159.

PRESIDENT'S REPORT. At the November meeting Joe Waters filled us in on what Atari revealed at COMDEX. Atari is to be in all phases of computerdom. John, Susie, Matthew, and Helen showed us what was new at L & Y. Matthew regaled us with which were the real, bloody games. Sometimes WGL takes back one of our auditoriums, so we were altogether in the large auditorium. The price is so right that we put up with that now and then. I was proud of the way the SIGs quickly moved to the sides, decided on two

program chairmen for each group and nominated a leader for each SIG in just 10 minutes. That has got to be a record.

Each SIG will have their own programs in December and January and February. Please note that there is no Current Notes in January so no announcements will be forthcoming to remind you of meetings. Trust me. There will be something worthwhile. There are always new additions to the public domain libraries.

NOVATARI 1988 Calendar

NOVATARI meetings, Wash. Gas Light, 5:30 pm:
 Jan 10, Feb 14, Mar 13, Apr 10, May 15, Jun 12
 Jul 10, Aug 14, Sep 11, *****, Nov 13, Dec 11
 Board meetings, Nottaway Park, 7:30 pm:
 Jan 6, Feb 3, Mar 2, Mar 30, May 4, Jun 1
 Jun 29, Aug 3, Aug 31, *****, Nov 2, Nov 30
 ***** ATARIFEST 1988 -- sometime in October.

SLATE OF NEW OFFICERS. The Nominating Committee has assembled the following slate of candidates for Novatari officers:

President	Georgia Weatherhead
VP ST	Ian Charteris
VP 8-bit	Al Friedman
Treasurer	Curt Sandler
Secretary	Edmond Bedsworth

Further nominations can be received from the floor at the December meeting. The elections will then be held at the January meeting.

COMPUTER EDUCATION NOVATARI will be offering computer courses for ATARI computers. These courses are designed for the beginner who is interested in learning how to use application programs. There will be courses for both the 8-bit and ST computers. Present plans include the following courses:
 8-bit: Assembly Language, Atariwriter+, Amodem, Bulletin Boards, Synfile+, Syncalc, DOS 2.5
 ATARI ST: Assembly language, Firstword, Flash, Bulletin boards, dBMAN.

The price for each course session is \$5 for NOVATARI members and \$10 for non-members. In addition to having people sign up for taking courses, we are also looking for volunteers to teach the courses. Anyone who volunteers to teach a course will be compensated for their effort.

To sign up to take a course or to teach a course contact Glenn Bernstein at 703-455-6053 between 6 and 9 pm.

ATARI USERS REGIONAL ASSOCIATION (AURA)

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Meetings. 1st Thursday. 7:00 pm (library sales).
 7:30-9:00 pm (Program) in the Temple Israel
 Social Hall. Temple Israel is located in Silver
 Spring, MD at 420 E. University Blvd. between
 Colesville Rd (Rt 29) and Piney Branch Rd (Md Rt
 320).

Correspondence. All correspondence, including
 membership renewals, changes of address, etc.
 should be sent to: AURA, P.O. Box 7761, Silver
 Spring, MD, 20904. AURA cannot guarantee CURRENT
 NOTES subscription fulfillment unless the member
 provides written confirmation of address changes,
 renewals, etc. to the address given above.

NOVEMBER MEETING: Norm Berk presented a
 demonstration of music on the ST with Music
 Studio and a Casio synthesizer. The
 demonstration was aimed at the person who is just
 getting into MIDI techniques. Barry Marcus used
 the Atari Music System on the 8-bit side.

ATARIFEST WRAPUP: We reviewed some of the things
 we found (and didn't find) at AtariFest '87. We
 are grateful to Cal Com for saving our bacon by
 buying up the excess stock of Tee Shirts from the
 Fest. These are available for sale at the store.
 We will also have them at meetings for those who
 wish to make up for their oversight at the Fest.
 Gary Purinton of Novatari has been appointed as
 the '88 AtariFest coordinator. It is not too
 early to give Gary your support.

NOMINATIONS: Bob Brock volunteered to serve as
 Treasurer and Dave van Allen volunteered to serve
 as Membership Chairman. Wayne Heiden has already
 volunteered to serve as 8-bit librarian come
 January. The 16-bit library is in John Barnes'
 hands until someone else picks it up.

We still need volunteers for President and Vice
 President. These jobs are actually easier than
 the others.

DECEMBER MEETING: The theme will be "Atari
 Stocking Stuffers". Bring your suggestions to
 Santa. The demonstrations will feature games for
 young and old.

NATIONAL CAPITAL ATARI USERS' GROUP (NCAUG)

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 Vice President. Mike Pollak..... 703-768-7669
 Treasurer..... Allen H. Lerman.. 301-460-0289
 XL/XE Librarian Mike Pollak..... 703-768-7669
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 Building is identified by sign for Madison
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NEW MEMBERS: join at meeting or send \$20, payable
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MEETINGS: 3rd Tuesday 7-10PM, Community Room,
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MEETINGS: 4th Tuesday, 7 - 9:30 pm, Walkersville
 H. S., MD Route 194, 1 mile north of MD Route 26
 (Liberty Rd).

NEW MEMBERS: Dues are \$25/year/family. Join at meeting or send check, payable to FACE, to Buddy Smallwood, P.O. Box 2026, Frederick, MD 21701.

SECRETARY'S REPORT: At our November 24th meeting, we had Mike Kerwin show us the fine 1st XLeNT Word Processor. We also saw some fine 8-bit public domain card games.

MARYLAND ATARI COMPUTER CLUB (MACC)

President..... Jim Hill..... 301-461-7556

MEETINGS: MACC meets on the last Tuesday of every month at 6:30 pm at the Pikesville, MD library. Take Baltimore Beltway exit 20 east (Reisterstown Rd) 1 mile. Pikesville Library on the left next to Maryland State Police Barracks. Feel free to call for info on the club's monthly 8-bit and ST demos.

NEW MEMBERS: Join at the meeting or contact Jim Hill. Membership fee is \$20/year pro-rated from June to end of year.

SOUTHERN MARYLAND ATARI USERS' GROUP (SMAUG)

President..... Thomas Crosby.... 301-843-1310
Sec/Disk Lib..... John J. Smith.... 301-862-9490
Treasurer..... Samuel Schrinar.. 301-843-7916
Newsletter Ed.... Leroy Olson..... 301-743-2200

MEETINGS: 2nd Thursday, 7:30 pm, John Hanson Middle School in Waldorf, MD. Take MD Route #5, proceed about 1/2 mile East of the intersection of Route 301 and take first left past the Kinney show store to school.

NEW MEMBERS: join at the meeting or send \$20 check, payable to SMAUG, to Sam Schrinar, 2032 Alehouse Court, Waldorf, MD 20601.

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Do you feel like we've circled the wagons and just about run out of ammo as the Indians prepare for their final charge that's going to over run us? I just got back from window shopping at Diskovery. The salesman said as of January they will carry no 8 bit software for Atari.

We 8 bitters have put a lot into our systems financially and emotionally. I got involved in the P.D. library because it looked like we were an endangered species. We probably will only occasionally see a new commercial program and most of those will have a Western European origin. But there is still so much we can do with our machines! I have P.D. software to add to our library at the rate of 3 disks a month that will last well into 1988. Help me find more by letting me know of any sources of P.D. material. We can keep our hobby active and vital if we pool what resources we have in common. Write or call Roy Brooks 4020 Travis Pkwy, Annandale, VA 22003, (703) 750-0146.

Demo #6 has excellent examples of Tim Kilby's Visualizer graphics by Jim Stevenson Jr. Jim has done scenes from The Dark Crystal story on the front of the disk and Star Trek screens on the back.

Demo #7 is a beautiful display of fractal graphics to see, print or create your own. Three documentation files on side B explain the concepts and the math far better than I ever could. Suffice it to say you have a unique opportunity to enjoy the power and beauty of your little ol' 8 bit computer. You may plot, calculate, cold dump or check you data with the utilities on the back of the disk. The front side features some of the prettiest graphic displays you can experience with a P.C.

In Space Lords Game #16 join forces with other players or fight it out alone with the alien forces who are trying to occupy your niche in the universe. Side B has already been formatted for you to save data and games on. Documentation on Side A hints at successful strategies but trial and error are good teachers too.

In Music #9 the Salt Lake User Groups put together an new version of AMS that loads your ramdisk with songs that play continuously one right after the other with very brief switching time between songs. There are 15 songs most of which come from the 60's & 70's Beatles albums. Another feature lets you control the tempo of the playback with a set of paddles plugged into port 1. One paddle grossly changes the speed of playing while the other one allows you to fine tune each song as desired. Of course you can always leave tempo at the default setting but who can resist turning those knobs!

Prices for WAPE members and CURRENT NOTES subscribers is \$3/disk plus \$1. for postage and handling for every 3 disks. Otherwise, cost is a flat \$5/disk (includes postage and handling). Send checks, payable to NOVATARI, to Alan Friedman, 5951 Heritage Square Drive, Burke, VA 22015.

CN Registered Clubs

Members of registered clubs receive CN at a discount rate (\$17 instead of \$20/year). To become a registered club, your club should send in an initial subscription list of 10 percent of the membership or six members whichever is less. For more information, contact Joe Waters, 122 N. Johnson Rd., Sterling, VA 22170. (703) 450-4761.

ABE'S ACES. Allentown Bethlehem Easton's ACE, PO Box 2830, Lehigh Valley, PA 18001. BBS 215-759-2683.
ACORN. Atari Computer Owners of Rochester, Kathy Scoville, PO Box 23676, Rochester, NY 14692. 334-5820.
AEL. Atari Exchange of Louisville, Don Garr, PO Box 34183, Louisville, KY 40232.
CAUG. Charlotte Atari Users Group, Joe Venturelli, PO Box 240313, Charlotte, NC 28224 704-366-4320.
CIAUG. Central Illinois Atari Users Group, Robert Handley, 1920 East Croxton Ave, Bloomington, IL 61701-5702 309-828-4661.
FLAG. Fort Leavenworth Atari Group, John Hutchinson, PO Box 3233, Ft. Leavenworth, KS 66027, 913-651-5631.
GRASP. Greater Richmond Atari Support Program, Tom Marvin, 1420 Yale Ave, Richmond, VA 23224, 804-233-6155.
HAUG. Huntsville Atari Users Group, Levin Soule, 3911 W. Crestview, Huntsville, AL 35816. 205-534-1815.
LRAA. Little Rock Atari Addicts, Keith Steensma, 28 John Hancock Circle, Jacksonville, AR 72076. 501-985-2131.
MAG. Midwest Atari Group (Iowa Chapter), Gordie Meyer, PO Box 1982, Ames, IA 50010. 515-232-1252.
NAUG. Nameless Atari Users Group, Dana O'Hara, 3475 Manassas Ct, Davidsonville, MD 21035. 301-798-0566.
PACUS. Packerland Atari Computer Users Society, Randy McSorley, 339 S. Maple St, Kimberly, WI 54136. 414-788-1058.
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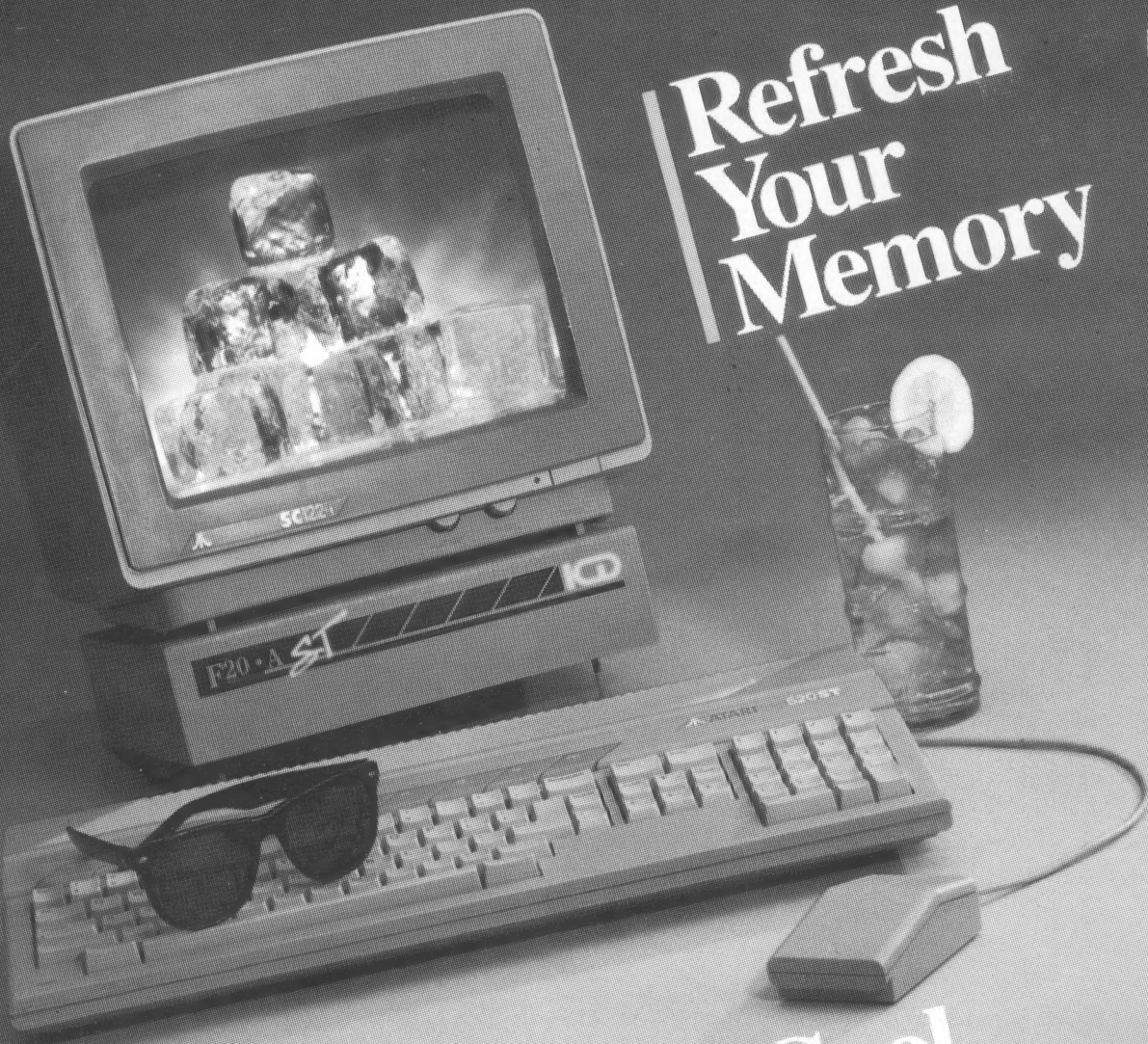
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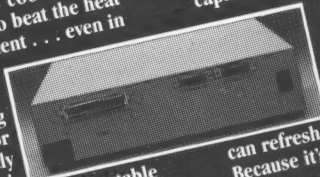
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